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BERKELEY WATERFRONT PLAN AMENDMENT TO THE CITY'S MASTER PLAN

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Berkeley residents share a common interest in the Waterfront which requires the enduring protection of this distinct and valuable natural resource. The shoreline ecology, the Waterfront's geographic prominence, its unique opportunities for bayfront related activities, and the social and cultural needs of the people of Berkeley require that the land be used with careful balance. As the last large undeveloped land area in the City, the Waterfront represents an important resource which must provide long term benefits to East Bay residents. Therefore, the City must protect, maintain, and enhance the quality of the bayfront environment and assure that balanced utilization and conservation of the Waterfront's resources reflect the public interest.

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AMENDMENT TO THE CITY'S MASTER PLAN
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BERKELEY WATERFRONT PLAN:

SUMMARY

The Berkeley Waterfront Plan establishes policies for the protection, enhancement, and development of the 170-acre area of the privately held lands bounded by the Interstate 80 freeway on the east, the Berkeley Marina on the west, and the Albany and Emeryville City limits on the north and south. The amendment to the City's Master Plan contains general objectives and principles for the Waterfront. The accompanying Specific Plan sets forth programs and more detailed standards for carrying out the policies of the Master Plan amendment. These two documents constitute the regulations controlling development on the Waterfront.

The plan designates the Waterfront as an area primarily for recreational, open space, and ecological uses, with an appropriate amount of private development to make the Waterfront part of a vibrant urban community. (See Figure 1.)

Major features of the plan are:

--Maintain the Meadow and Brickyard areas as open space. The City will evaluate the feasibility of acquisition of some or all of the open space areas and will also determine appropriate requirements for dedication as conditions of development approvals.

--Dedication of a continuous 100-foot shoreline band for public access, with an additional building setback of up to 100 feet wherever possible.

--Protection and enhancement of wetlands habitat, especially on the Meadow and Brickyard.

--Development of Berkeley Beach south of University Avenue, subject to the resolution of water quality and fill issues.

--Improvement of water quality of all creeks extending through the Waterfront, and opening of Schoolhouse Creek in a natural configuration.

--Enhanced water recreation in the North Basin, with on-shore support facilities such as boat houses in North Waterfront Park, provided that environmental standards are met and that this use is consistent with the City's plan for North Waterfront Park.

--New connections to the Waterfront from the rest of Berkeley, for pedestrians, bicycles, and the disabled, at Gilman Street, Virginia/Cedar Streets, University Avenue, and Ashby Avenue.

--Redesign by CalTrans of Interstate 80 through Berkeley, including closing of the West Frontage Road south of University Avenue, to provide additional freeway capacity and protect the waterfront from through traffic.

--On-site and off-site circulation improvements, for both vehicles and pedestrians, financed by the developer.

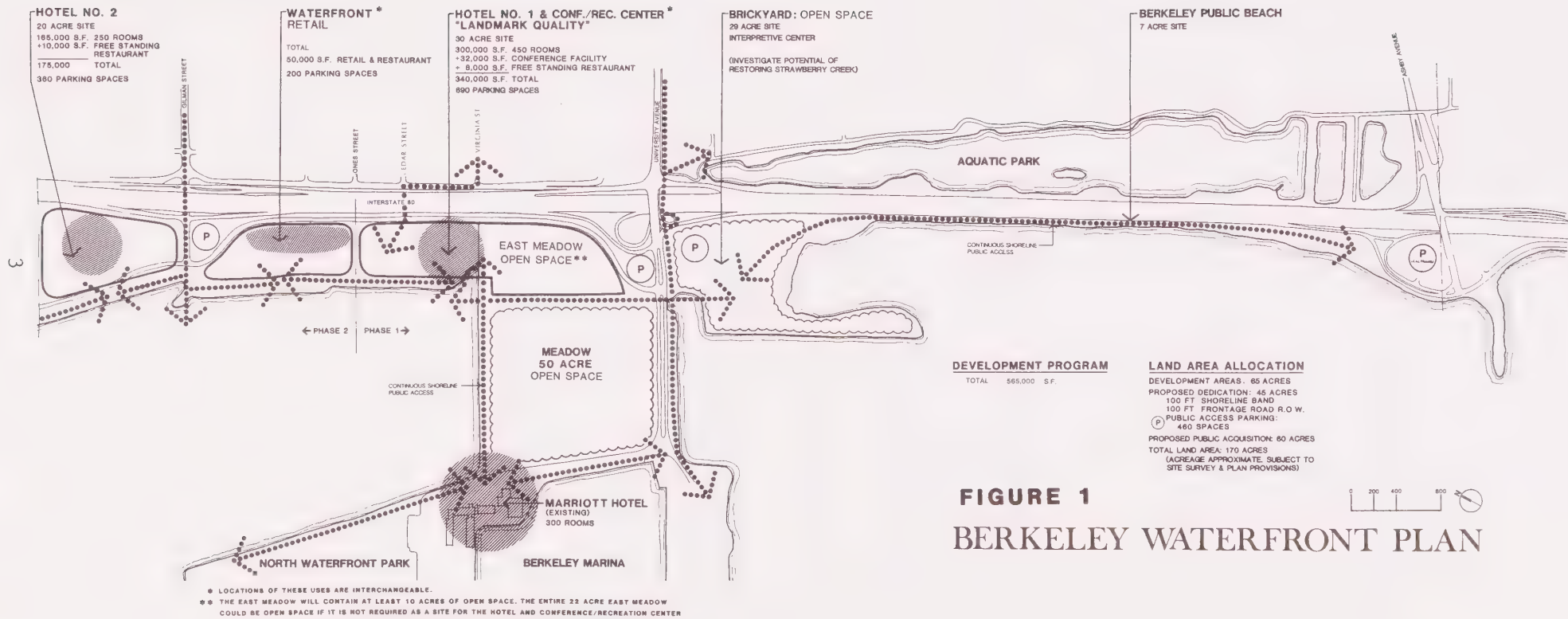
--A hotel or other lodging of up to 450 rooms and conference center in the North Basin Strip unless circumstances require a location in the East Meadow, integrated with open space to the south and west, and with other retail/restaurant development to the north and south.

--A second hotel or other lodging of up to 250 rooms north of Gilman Street.

--Water related retail-restaurant uses in the North Basin Strip, containing a wide range of food outlets and water-related commercial uses.

--A hostel in the North Basin Strip, subject to public acquisition or negotiation with the property owner.

The maximum total amount of private commercial development in the plan is approximately 565,000 square feet. More than 100 acres of the 170-acre total would be dedicated for public access or maintained as open space. The plan requires clustering of all commercial development in locations that take advantage of accessibility to transportation and other services, and that protect environmental values such as the seasonal wetlands on the Meadow. The plan treats the entire 170-acre Waterfront as a single parcel, and allocates the amount and locations of allowable development in accordance with the environmental and physical constraints identified in the studies done in preparing the plan and in the Environmental Impact Report.



BERKELEY WATERFRONT PLAN:

AMENDMENT TO THE CITY'S MASTER PLAN

This report amends portions of the City of Berkeley 1977 Master Plan pertaining to the Waterfront: pages 71, 72, 77, and 78 (Policies 3.40-3.45) (See Figure 1.)

1. GOALS FOR THE WATERFRONT

The following goals for the waterfront are the basis for the policies and programs of the Master Plan Amendment and Specific Plan.

1. Establish the Waterfront as an area primarily for recreational, open space, and environmental uses, with preservation and enhancement of beaches, marshes, and other natural habitats.

2. Develop the Waterfront as part of a continuous East Bay shoreline open space system.

3. Provide for an appropriate amount and type of private development, to make the Waterfront part of Berkeley's vibrant urban community, attractive to and usable by Berkleyans, neighboring Bay Area residents and other visitors.

4. In all types of development, meet the needs of unemployed and underemployed Berkeley residents, in both construction and permanent jobs.

5. Establish uses and activities that reflect and enhance the unique character of the Waterfront and foster the community's relationship with the shoreline.

2. POLICIES FOR THE WATERFRONT

Following are the policies for each of the elements of the Waterfront Plan. Descriptive material on conditions, trends, and issues for each plan element is included in Part 4 of this report.

2.1 Policies from the Land Use Element

2.1.1 General Policies

The Berkeley Waterfront Plan provides for uses which will:

1. Preserve and protect the open space, views, wetlands, mudflats, seasonal ponds, creeks, meadows, and beaches of the Berkeley Waterfront.
2. Restore and improve the features of the natural environment so that the Waterfront approximates the character of the original shoreline wherever feasible.
3. Create a social environment where Berkeley, East Bay residents, and visitors can mingle in harmony and mutually enjoy their natural heritage.
4. Express the primary recreational, open space and environmentally significant character of the Waterfront.
5. Create an environment which enhances the unique qualities of Berkeley's Waterfront and its special meaning to the City and region.
6. Enhance the strength and diversity of the Berkeley economy.
7. Generate jobs which meet the needs of Berkeley's unemployed and underemployed population and provide opportunities for job mobility.
8. Generate revenues which exceed municipal service costs over the long term, to make possible other City objectives.
9. Create water-related job and business opportunities which relate to the site's unique location which cannot be easily created elsewhere in the City or region.

10. Create business and employment opportunities for Berkeley residents which are compatible with and will not adversely affect those found in other economic centers within Berkeley.

11. Create conditions which will help offset pressures for housing gentrification in West Berkeley and elsewhere in the City, through requirements for developer exactions to assist housing programs.

12. Create opportunities for advancement of Berkeley's Affirmative Action policies.

13. Provide for goods and services that complement or reinforce other land uses in the Waterfront area.

14. Not compete with development elsewhere in the City (such as Downtown) that is desirable in those locations but incompatible with the character of the Waterfront.

15. Provide opportunities for small businesses that are locally owned and controlled.

16. Provide transition of Berkeley's Waterfront to the Waterfront development in Albany and Emeryville.

17. Cluster development where it is most accessible, least subject to seismic hazards, where utilities and services are most readily available, and where environmental impacts are minimal.

18. Phase development in accordance with the timing of traffic improvements that will make necessary additions to capacity.

2.1.2 Policies for Uses

Based on the opportunities and constraints summarized in Part 4 and described more fully in the background documents listed in the Appendix, following are the City's policies for land uses for the entire Waterfront study area.

Recreation and Open Space

These are top priority uses for the Waterfront. They should encompass a range of recreational and environmental uses, including:

--A continuous shoreline public access band of at least 100 feet in width, with an additional setback of up to 100 feet for structures, wherever possible.

--Wildlife habitat.

--Recreational uses for people of different ages, classes, cultures, and abilities.

--Water recreational uses, including protection of shoreline areas used for fishing from the impact of motor boats.

--Between 20 and 25 acres of playing fields.

--Active recreation facilities such as a play-learning center, and play structures for children.

--Berkeley Beach is a high priority, whether in the short or long term. It should not be precluded by short-term development or other uses.

--Facilities for cultural activities and the arts, such as galleries and performance spaces, to be integrated within the development so that visitors may enjoy the rich cultural diversity of Berkeley and local artists may profit from their patronage.

--Other public uses may be considered in the future provided they share a relationship with the Waterfront and the Berkeley community, involve facilities, structures, and land uses which are minimal in nature, and provided that the feasibility and benefits of such proposed uses are weighed against the private and public uses already considered and against other competing similar uses.

Recreational and Commercial

Small-scale retail uses are desirable that offer recreational products and services, such as windsurfing and sailing equipment and lessons, bicycle and boat rentals, fishing supplies, and chandleries. A variety of restaurants is desired, especially inexpensive, family-oriented ones. These activities should meet the needs of people of all ages, income levels, disabilities, and ethnic backgrounds. Recreational-commercial activities can provide opportunities to meet the targeted job goals of the City, as well as create an interesting environment. Other kinds of small-scale retail and commercial uses, especially water-related, which serve visitors to the Waterfront should be encouraged. They should also serve people of all ages, income levels, abilities, and ethnic backgrounds. However, commercial theme parks and high intensity specialty commercial centers such as Pier 39 in San Francisco are not considered appropriate or desirable.

Conference and Community Centers

The Waterfront should include a mix of traditional and innovative conference and cultural facilities for University and business-sponsored events, as well as space for less formal gatherings and for community groups which cannot afford most conference/ lodging facilities. These centers on the Waterfront should not adversely affect similar facilities downtown and elsewhere in Berkeley.

Any conference facility should be fully compatible with lodgings in the North Basin Strip, such as a hostel, and should be available to and affordable by the community. The conference center should be available for multiple performing arts uses, including rehearsal space, and exhibition space for local artists.

Lodgings and Accommodations

Lodgings should orient toward and invite the public, rather than orienting inward. They should accommodate a range of income and age groups, including community uses. A hostel which provides low-cost accommodations for travelers and young people is highly favored. Lodgings that accommodate people visiting the Waterfront for conferences and recreational activities, that support other activities in the Berkeley community, and that take advantage of the unique waterfront environment are preferable. Hotel developers shall be required to provide inclusionary accommodations for low- and moderate-income travelers, either within the hotel or elsewhere on the Waterfront.

Horticulture and Speciality Agriculture

Horticulture, speciality agriculture, and aquaculture, especially that using innovative methods, are encouraged, possibly in conjunction with restaurants on the Waterfront.

Housing

Berkeley has a strong commitment to expanding the supply of housing in the City, especially for persons of low and moderate incomes, as documented in the 1984 Housing Element and as demonstrated by the City's variety of housing programs. However, the Waterfront is not deemed to be an appropriate location for residential development. Housing would potentially privatize the Waterfront and intrude on public uses. The land required to establish a socially viable community would probably be too great given other goals and community-oriented uses envisioned. Other problems are seismic hazards, and the difficulty of providing low- and moderate-income units because of high development costs.

Offices

Offices, other than those needed for management of the preferred uses described above, are not appropriate for the waterfront. This use has fewer entry-level jobs per dollar invested and per square foot, greater negative social and economic impacts, and higher peak period traffic generation than other activities envisioned for the waterfront.

Industry

Conventional light or heavy industry is not appropriate for the Waterfront. It would adversely affect the desired public/recreational character of the site and present potentially negative environmental and traffic impacts. An exception would be the possible inclusion of a composting facility in the Stables Area.

Parking

Parking for off-site uses is not a permitted use on the Waterfront. Existing parking for Golden Gate Fields could continue as a non-conforming use, but could not be expanded.

2.1.3 Policies for Locations

Following are general policies for the sub-areas of the Waterfront.

South of the Brickyard

This narrow band between the freeway and the water, extending south to Emeryville, and containing 7 acres of land, could not accommodate any development other than extension of a continuous shoreline path and beach improvements. The plan supports the development of Berkeley Beach in this area, subject to more detailed planning, BCDC approval of any needed fill, and improvements in water quality.

Brickyard

The Brickyard should remain as open space. The Brickyard is a strong focal point for access to the area and should preserve the view for the City and the Waterfront to San Francisco. A beach, and enhanced natural habitat at the Spit are encouraged. No structures should be allowed except for bathroom facilities (including changing rooms) and a nature display and interpretive center not to exceed 5,000 square feet. All or part of the Brickyard Peninsula may be removed as part of one of the beach plan variations.

Meadow

To assure an integrated and contiguous open space area, the 50-acre Central Meadow extending from the Frontage Road to the Marina and as much of the East Meadow as possible, without interfering with Phase I development, should remain as open space. The Meadow has prime open space value and is the most desirable location for recreational activities. It provides important views to and from the Waterfront. Its location is unique as a highly visible part of the San Francisco Bay shoreline, immediately east of the Golden Gate, and as the "front yard" for the City.

No structures should be allowed on the Central Meadow, with the possible exception of bathroom facilities (including changing rooms) at appropriate locations, structures such as soccer goals, which are integral parts of playing fields, benches, tables, and windbreaks. Structures for indoor sports, bleachers, refreshment stands, and other uses should not be permitted. Any physical improvements in the Meadow must provide for the protection and enhancement of wetlands habitat on the site. Playing fields, such as for soccer, may be allowed only if they do not conflict with wetlands policies of the Waterfront Plan, and with needs for open space, picnic areas and nature areas. In areas of the Central Meadow other than playing fields, landscaping should restore natural wetlands characteristics. Clustered parking and picnic areas should be provided near Marina Drive adjacent to South Basin Strip.

East Meadow/Phase I Planning Area

This 30-acre area should provide a sensitive visual transition between development in the North Basin Strip and the open space in the Meadow. As much of the area as possible should remain as open space, consistent with the Phase I development. The location for development is north of Virginia Street unless the developer demonstrates that this location is legally and financially infeasible because of the lease obligations. If there is no development in the East Meadow, this entire area would be retained for open space. Should development occur in the East Meadow, it is estimated that at least 12 additional acres in the East Meadow area could remain open space. The City will investigate methods of facilitating the location of development in the desired location, north of Virginia Street. All development must be visually and physically open to the Meadow. School House Creek, at Virginia Street, should be restored, and no Bay fill allowed.

All development should be clustered as close to the freeway as possible and integrated as a total complex, not treated as separate buildings and uses. The plan allows flexibility in the locations of uses, in the East Meadow/Phase I Planning Area and the North Basin Strip. Permitted uses include a hotel or other lodging of up to 450 rooms (up to 300,000 square feet) with outdoor recreation facilities restaurants and food related services and Conference Center (up to 40,000 square feet) to be built in the first phase of development. The Conference Center should be accessible to the public and connect with the Meadow open space. It should include facilities for the performing arts and exhibition space.

The above-described development may be allowed only if the landowner or developer establishes that any adverse environmental impacts, including, but not limited to, those described in the Environmental Impact Report, including, but limited to, traffic, geology, wetlands, and endangered-species problems, will be satisfactorily solved or mitigated. Any adverse impacts as to wetlands shall be mitigated on property within the Berkeley Waterfront.

North Basin Strip

Permitted uses, the locations of which could be interchanged with those in the East Meadow/Phase I Planning Area, include a hostel, restaurants and retail, preferably related to Waterfront recreation. The total amount of restaurant/retail use should not exceed 50,000 square feet. Restaurants and other food outlets should reflect Berkeley's cultural diversity and serve a wide range of income groups.

The recreational use of the North Basin itself should be enhanced, possible with a small craft anchorage, with supporting facilities such as boat houses on the shoreline of North Waterfront Park, subject to protection of water quality and consistency with the City Plan for North Waterfront Park.

The New Waterfront Road will be located on the freeway side of the development unless overriding considerations can be demonstrated to the City Council's satisfaction. The development should be as close as possible to the New Waterfront road; however, views from the freeway should not be blocked, if possible, since the site provides the first view of the Bay for the southbound motorist.

Stables Area

The easterly area is designated for development of a hotel or other lodging of up to 250 rooms (up to 165,000 square feet) with related restaurants and food services (up to 10,000 square feet) on a 20-acre site during the second phase of the development. The shoreline band of open space and public access should connect to Fleming Point in Albany. Other possible uses in the Stable Area include a composting facility north of the hotel provided the facility is properly screened and all environmental concerns are met.

2.1.4 Policies for Development Phasing

It will be necessary to coordinate the timing of development of the waterfront with completion of improvements to the Interstate 80 freeway interchanges, to assure that the additional capacity is not exceeded. The present Caltrans program for improving the freeway between the Ashby and

Gilman interchanges will not be completed until 1995 at the earliest. Traffic analysis indicates that no development at the Waterfront could occur under the existing conditions, while maintaining the City's policy of level of service "D". The Circulation Element of this Master Plan Amendment and the Specific Plan include a number of reasonable improvements which the property owner could undertake in order to accommodate the proposed development, prior to CalTrans freeway and interchange modifications.

The amount and timing of total development permitted will depend upon in place transportation capacity, taking into account development in Albany and Emeryville, and upon the holding capacity of the land based on physical and planning constraints. Development of Berkeley's Waterfront as proposed in the Plan will have a minimal impact on traffic congestion on the freeway and City streets. Nonetheless conditions are expected to reach unacceptable levels by the year 2010 because of total growth in the region. The Cities of Berkeley, Albany and Emeryville should establish a joint sub-regional growth management system to minimize traffic congestion through phased development. The State of California should enact legislation to establish effective regional planning and implementation to deal with Bay Area transportation needs.

2.2 Policies from the Circulation Element

2.2.1 General Policies for Circulation

1. Minimize traffic congestion generated during peak periods and the rest of the day for transit and autos in the City and region; achieve a service level of at least "D" (.89 of capacity) of all intersections serving the Waterfront.

2. Reduce dependence on the automobile; encourage transit use and shared rides.

3. Improve bicycle, pedestrian, and disabled access to and circulation within the Waterfront, while avoiding conflict with vehicular circulation. These routes should serve commuter as well as recreational needs.

4. Create a continuous view of San Francisco Bay and the Golden Gate for those who travel along the Waterfront.

5. Minimize the demand for parking and the amount of land devoted to it.

6. Minimize traffic congestion on local streets.

7. Create pedestrian areas entirely separated from automobiles.

8. Provide for safe, efficient on-site circulation.

9. Provide convenient, usable east-west pedestrian, bicycle and automobile links between West Berkeley and the Waterfront.

10. Link different parts of the Waterfront by pedestrian and bicycle paths that are separated from traffic corridors.

11. Require innovative transit facilities connecting different parts of the Waterfront with each other and with other areas of Berkeley.

12. Restrict the amount of development at any given time in accordance with transportation capacity.

13. Require developers to provide transit mitigation fees to support public transportation for employees, visitors, and customers.

2.2.2 Policies for Circulation Improvements

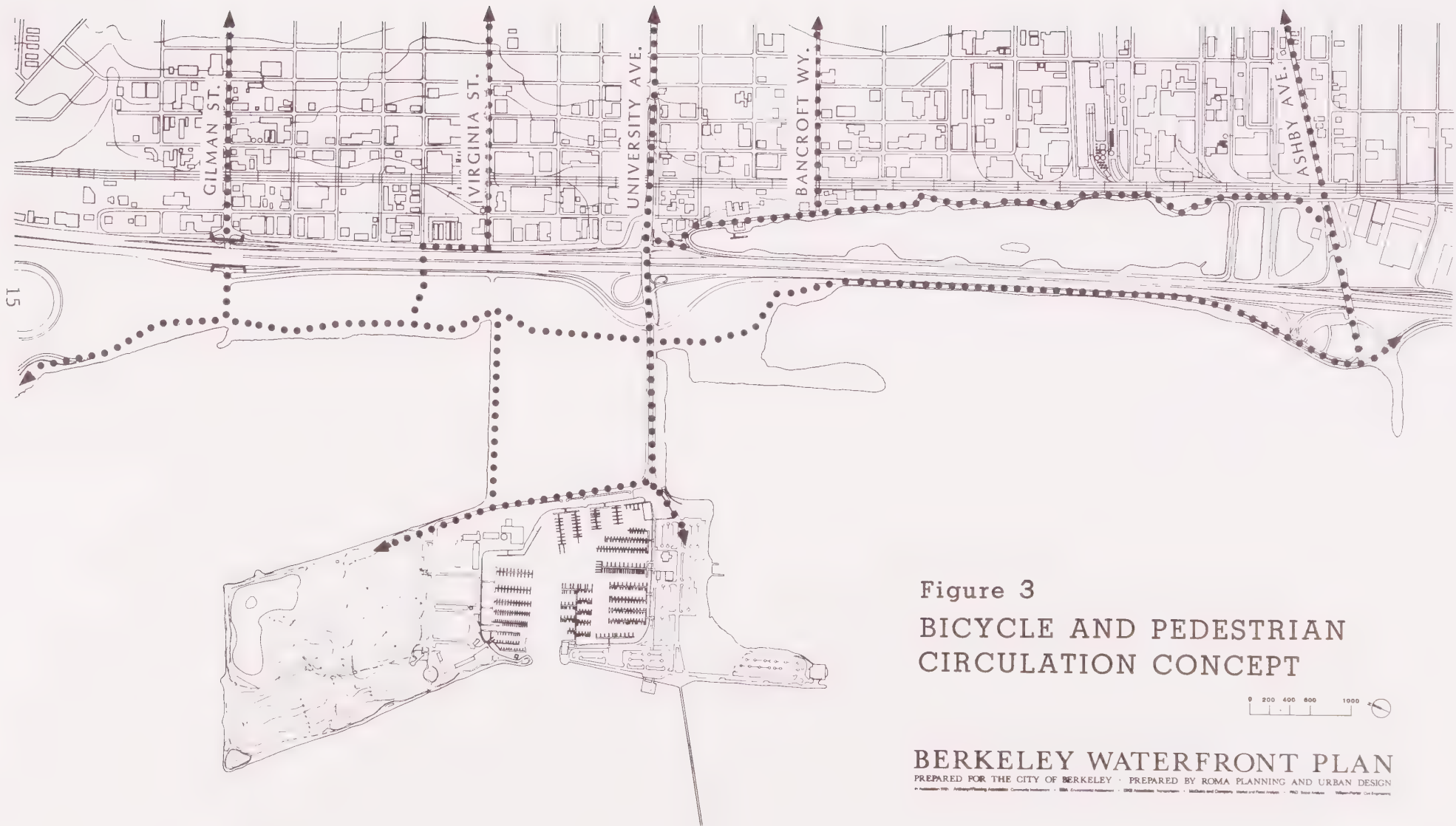
The Circulation Element of the Waterfront Plan includes policies for 1) modifications to the Interstate 80 freeway corridor, 2) improvements to the roadways, bicycle paths, and pedestrian routes at the Waterfront, and 3) modifications to the existing local transit service. (See Figure 2, Vehicular Circulation Concept; Figure 3, Bicycle and Pedestrian Circulation Concept; and Figure 4, Transit Service Circulation Concept.)

Interstate 80 Modifications

CalTrans is preparing plans for improvements to the Interstate 80 freeway within Berkeley that include adding lanes; rebuilding the University Avenue, Gilman Street, and Ashby Avenue interchanges; building a new grade-separated bicycle-pedestrian facility within the University Avenue interchange; and adding sound wall barriers along the Aquatic Park frontage. (See Figures 5 and 6.) The Circulation Element of the Waterfront Plan calls for a number of changes in the CalTrans proposal to serve the proposed land use effectively, reduce traffic impacts from diversion of automobiles onto City streets during peak periods, and improve bicycle, pedestrian, and disabled access between the Waterfront and the adjacent West Berkeley neighborhoods. More detailed descriptions and drawings of these improvements are included in the Specific Plan.

1. Freeway between Gilman and University: investigate the impacts and feasibility of widening to five lanes north and southbound as recommended by CalTrans.

2. Freeway between University and Ashby: investigate the impacts and feasibility of widening to five lanes north and southbound as recommended by CalTrans. Replace Bolivar Street adjacent to the freeway with a landscaped buffer and sound wall to mitigate the noise impacts on Aquatic Park. Replace the frontage road with a landscaped buffer, bicycle way, pedestrian promenade, and beach.



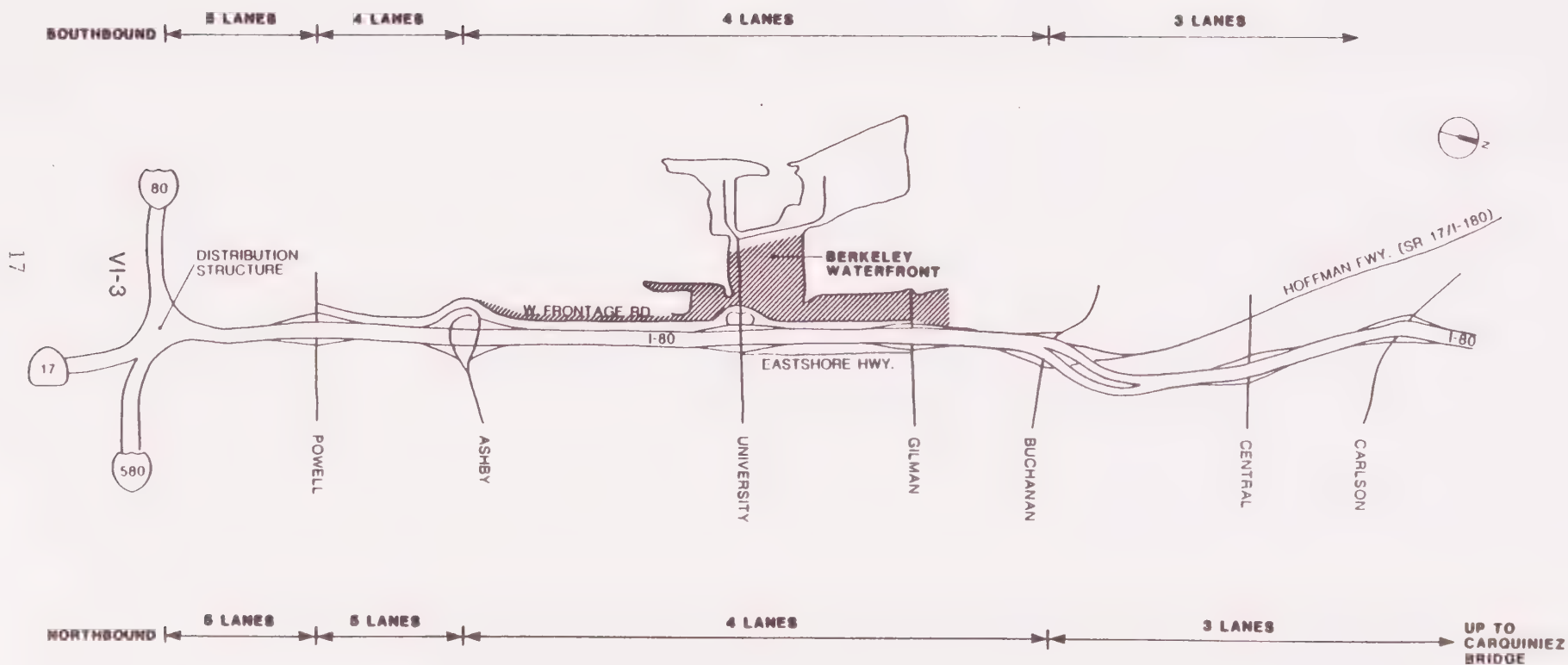


Figure 5
EXISTING FREEWAY GEOMETRICS

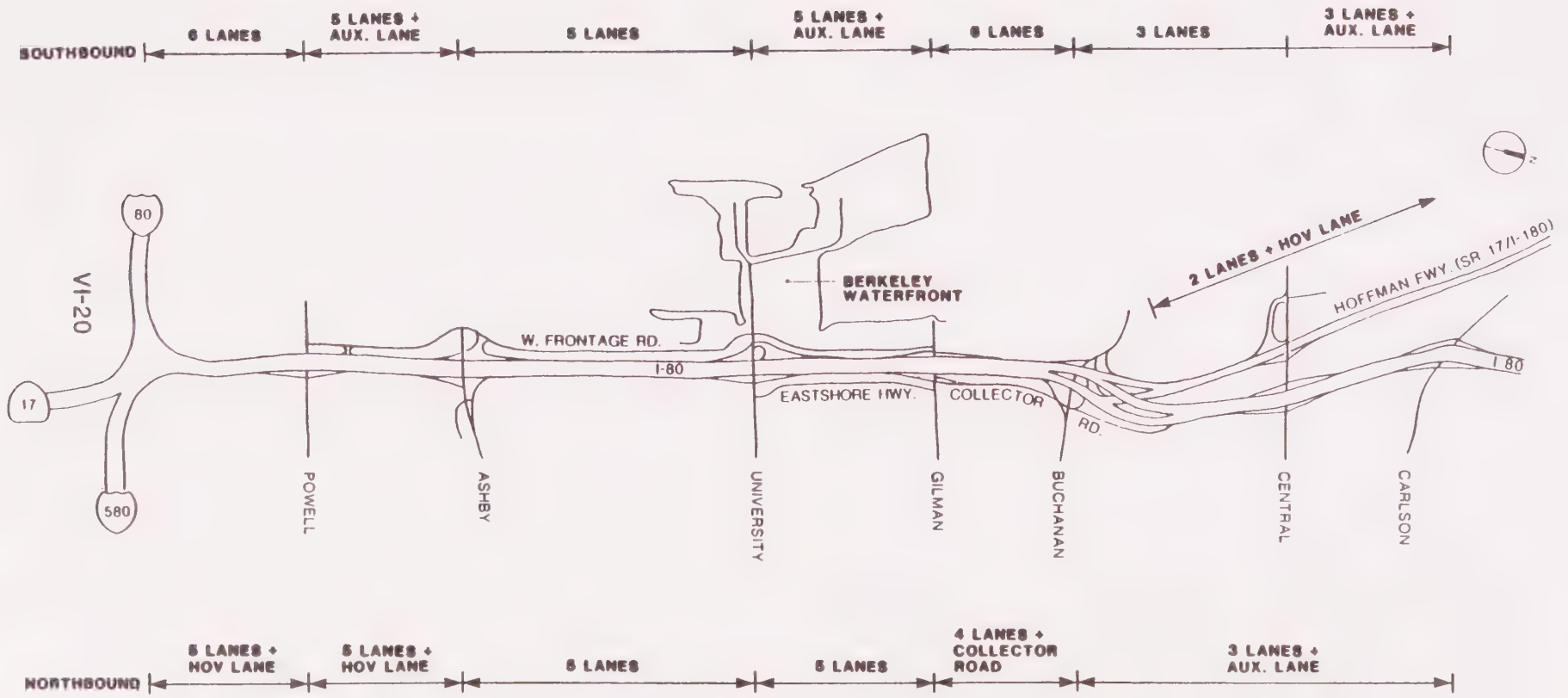


Figure 6
CALTRANS PROPOSED GEOMETRICS

3. Auxiliary lanes: allow additional auxiliary lanes on I-80 only if they are necessary to mitigate adverse impacts on local streets such as 6th, San Pablo and University. Such additional lanes are not intended to encourage increased development on the Waterfront.

4. University Avenue Interchange: Recommended design changes are described in the Specific Plan. Construct new two-way bicycle/pedestrian facility connecting Waterfront Road, Aquatic Park, and Fifth Street. Construct another two-way bicycle/pedestrian overpass between West Berkeley and the Waterfront along Cedar Street.

5. Ashby Avenue Interchange: Recommended design changes are described in the Specific Plan. Make the CalTrans park-and-ride lot available to recreational users on weekends and holidays.

6. Gilman Street Interchange: Recommend design changes are described in the Specific Plan.

Waterfront Circulation Network

The circulation network provides vehicular, bicycle, pedestrian, and wheelchair access to the Waterfront. The network uses many existing City street rights-of-way, connects with the existing circulation system, and provides new continuous north-south shoreline access to Albany and Emeryville.

1. Bicycle/Pedestrian Improvements

Continuous Shoreline Trails: Provide a continuous two-way pedestrian bicycle way along the shoreline from the north to south City limits. Provide shoreline access along the entire Bay edge, including the North and South Sailing Basin, the Meadow, Brickyard, and Berkeley Beach.

West Berkeley Connections: Connect with the West Berkeley pedestrian and bike ways at University Avenue, Virginia Street, Gilman Street, Ashby Avenue, and the new bicycle/pedestrian crossing at Virginia/Cedar Street.

North Waterfront Park and Marina connections: Connect to the city-owned Marina, North Waterfront Park, and Shorebird Park.

Brickyard: Provide a pedestrian trail along the shore, subject to protection of environmentally sensitive areas.

Emergency Access: Design bicycle and pedestrian ways to accommodate emergency vehicles.

Disabled Access: Construct all pedestrian ways to be barrier free, to promote use by the movement impaired.

2. New Waterfront Road: Build a new two-lane Waterfront Road from the Phaseli hotel site in the Stables area to University Avenue. Recommended design standards are described in the Specific Plan.

3. University Avenue: Reconstruct between Shoreline Drive and Marina Drive.

Transit Improvements

The Waterfront is now served by the AC Transit line with operating headways from 18 to 30 minutes. It is recommended that this service be modified to improve access to the waterfront and to provide transit service to establishments along Gilman Street and to the retail center at Fourth Street.

Transit Innovations: Waterfront developers will be required to provide innovative transit facilities, such as elephant trains and shuttles, to link parts of the Waterfront together and reduce the use of private automobiles on site.

Transportation Systems Management: The use of carpools, vanpools, and flexible working hours for employees, to reduce peak period traffic generation will be a required part of the transportation plan for any Waterfront development.

Transit Mitigation Fees: Developers will be required to provide appropriate transit mitigation fees.

Short-Term Local Improvements

CalTrans has recently changed its priorities for I-80 improvements. The portion between Ashby and Gilman, through Berkeley, will not be completed until 1995 at the earliest. Under existing conditions no development on the Waterfront can occur and still attain the City's policy of level of service "D", volume to capacity ratio of 0.89 or better, at intersections. (See Tables 1 and 2.)

There are reasonable improvements the property owner could make in order to allow some development before completion of the freeway modifications. These improvements, described in more detail in the Specific Plan, are examples of improvements that will be needed to meet the City's circulation needs when waterfront development occurs. Specific improvements will be subject to the City's review, public hearing and approval processes. Possible improvements include an eastbound left turn pocket at the Powell/West Frontage Interchange, signalization of the southbound ramps intersection, relocation of Waterfront Road 400 feet west of the southbound ramps, an eastbound left turn lane at the University/West Frontage interchange, and construction of new Waterfront Road between Gilman and south of the Brickyard area with additional left turn pockets at the University/Frontage intersection; at the Gilman Street interchange, relocation of West Frontage Road 500 feet west of the southbound ramps, signalization of the northbound and southbound ramp intersections with Gilman, widening of Gilman Street to provide right and left turn pockets at the ramp intersections and at Eastshore Highway, and restriction of traffic on Eastshore Highway at Gilman Street to right turns only; at the Sixth/University Intersection, addition of a northbound left and southbound right turn lane.

Table 1
EXISTING AND PROJECTED VOLUME-TO-CAPACITY RATIOS

	Intersection	Existing Geometrics Existing Traffic ¹		Existing Geometrics 1990 Base Traffic		Existing Geometrics 1990 Base Traffic + Project Phase I		With Short-Term Improvements ²	
		AM	PM	AM	PM	AM	PM	AM	PM
1.	Gilman Interchange	0.81	0.92	0.86	0.98	0.87	1.14	0.76	0.89
2.	Univ./San Pablo	0.68	0.82	0.70	0.85	0.71	0.87		
3.	Univ./Sixth	0.62	0.92	0.66	0.94	0.70	1.04	0.64	0.92
4.	Univ./N.B. Ramps	N/A	N/A	N/A	N/A	N/A	N/A		
5.	Univ /W. Frontage/ S.B. Ramps	0.83	0.75	0.88	0.80	1.13	1.16	0.89	0.61
6.	Ashby/Bay	N/A	N/A	N/A	N/A	N/A	N/A		
7.	Ashby/N.B. Ramps	N/A	N/A	N/A	N/A	N/A	N/A		
8.	Ashby S.B. off/ West Frontage	0.58	0.44	0.62	0.47	0.65	0.57		
9.	Ashby S.B. on/ West Frontage	0.80	0.51	0.86	0.55	0.90	0.66		
10.	Ashby/W. Frontage	N/A	N/A	N/A	N/A	N/A	N/A		
11.	W. Frontage/Private Access Road	0.85	0.47	0.90	0.50	0.93	0.54		
12.	Powell Interchange	0.83	0.93	0.89	0.99	0.92	1.03	0.89	0.99

¹ Based on 1983 and 1984 intersection turn movement counts conducted by DKS Associates.

² The V/C ratios reflect additions of 1200 PM peak and 1000 AM peak trips to the current traffic volumes. The other intersections remain the same.

Table 2

LEVEL OF SERVICE INTERPRETATION

<u>Level of Service</u>	<u>Description</u>	<u>Average Vehicle Delay (Seconds)</u>	<u>Volume to Capacity Ratio</u>
A	Free Flow. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Insignificant delays.	0-16	0.0-0.59
B	Stable Operation. An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. Minimal delays.	16-22	0.60-0.69
C	Stable Operation. Major approach phase may become fully utilized. Most drivers feel somewhat restricted. Acceptable delays.	22-28	0.70-0.79
D	Approaching Unstable. Drivers may have to wait through more than one red signal indication. Queues develop but dissipate rapidly, without excessive delays.	28-35	0.80-0.89
E	Unstable Operation. Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection. Significant delays.	35-40	0.90-0.99
F	Forced Flow. Represents jammed conditions. Intersection operates below capacity with low volumes. Queues may block upstream intersections. Excessive delays.	40 or greater	not applicable

Source: "Highway Capacity Manual," Highway Research Board, Special Report No. 87, Washington, D.C., 1965.

"Interim Materials on Highway Capacity," Transportation Research Board, Circular No. 212, Washington, D.C., January 1980.

DKS Associates.

The total amount of retail development would have to be limited. The retail component is recommended to occur in phase II, after expiration of the lease with the California Racing Association in 1997, by which time the freeway improvements would be completed. Also, it will be necessary to phase the development of recreational facilities in accordance with traffic capacity.

2.3 Policies from the Housing Element

The Berkeley waterfront is not found to be appropriate for the development of housing. A residential community on the Waterfront would tend to create a closed environment, rather than opening the Waterfront to the public. The extensive amount of land needed for a residential community would detract from the recreation/open space/ecological character of the Waterfront residential development on the Waterfront would be expensive, or would require heavy subsidies which would be more cost-effective if spent elsewhere in Berkeley.

Development of other uses on the waterfront should have a positive offsite impact on the City's housing supply by complying with the following policies:

1. Stipulate that waterfront developers provide off-site housing or contribute to a City housing fund, to help mitigate the housing impacts of development, either through implementation of a City ordinance for such mitigation fees or through an agreement with the developers.
2. Direct monies from this fund toward housing programs described in the Housing Element and Housing Strategy.
3. Discourage land use changes that would lead to displacement of existing residents in West Berkeley, through implementation of zoning, rent control, and controls over removal of housing units.
4. Link adjacent residential areas to the Waterfront and the Bay, to improve the attractiveness of these communities and increase recreational opportunities for residents.

2.4 Policies from the Conservation/Recreation/Open Space Element

2.4.2 General Policies from the Conservation/Recreation/Open Space Element

1. Restore and improve natural and cultural resources and environmentally sensitive areas, such as wetlands, mudflats, and the marine environment.
2. In any public or private development assure that marine and wetlands habitat is enhanced and protected, and re-created where possible.
3. Improve important potential environmental features, such as the Berkeley Beach, Schoolhouse, Codornices, and Potter Creeks.

4. Meet or exceed environmental standards, such as air and water quality and noise protection.

5. Enhance popular understanding of natural process, the marine environment, and the history and significance of the Berkeley Waterfront.

6. Promote land use, development prototypes and landscape treatments which have the greatest potential for conserving energy and water resources.

7. Enhance public access to the Bay, by providing a continuous shoreline open space, creating a variety of water's edge experiences, and improving the opportunity for linear recreation activities such as jogging, bicycling, sightseeing, walking, and wheelchair access.

8. Provide a variety of recreational, educational, and cultural activities appropriate to this unique Waterfront setting.

9. Help to meet Berkeley's and the region's future needs for open space and recreation.

10. Help to satisfy local and regional recreational needs or preferences of different age groups, income groups, and the disabled.

11. Link with and complement recreational activities at North Waterfront Park, Aquatic Park, and the Marina.

12. Encourage water-related sports especially appropriate for this setting.

13. Minimize the use of rip-rap wherever possible, subject to shoreline stability requirements.

2.4.3 Policies for Locations

1. Cluster development in locations which are close to existing infrastructure and which protect environmental values.

2. Protect wetlands habitat in the Meadow and Brickyard areas in particular and assure that no development occurs which would impair wetlands habitat values.

3. Establish a continuous shoreline public access band of at least 100 feet in width with improvements for bicycles, pedestrians, and the disabled.

4. Establish a nature preserve south of University Avenue at the Brickyard Cove if this area becomes publicly owned.

5. Maintain the Meadow for open space and provide for recreational uses if it becomes publicly owned.

6. Enhance the North Basin with shoreline improvements in North Waterfront Park serving recreational uses to promote boating, fishing, windsurfing, and transient mooring in the existing sheltered water.

7. Protect the mudflats and open waters of the South Basin to support wildlife use, by restricting use of the adjacent land to activities with minimal impacts, such as the shoreline trail.

8. If it becomes publicly owned improve Berkeley Beach along the south Basin's east shoreline.

9. Improve the water quality of the four creeks running through the site.

10. Exercise the public trust over submerged lands, where necessary and appropriate, in accordance with the policies of this plan.

2.5 Policies from the Noise Element

1. Locate uses which are relatively noise sensitive, such as passive open space, where noise impacts from the freeway are lowest. (See Figure 7, Figure 8)

2. Locate uses which are less noise-sensitive (commercial, sports facilities) where freeway noise impacts are greater, buffering the more noise sensitive uses where possible.

3. When uses are in locations with high noise impacts, mitigate these impacts with intervening buildings, sound walls, or acoustical treatment of structures.

4. Buffer Aquatic Park from freeway noise by encouraging CalTrans to construct a sound wall as part of the Interstate 80 improvements.

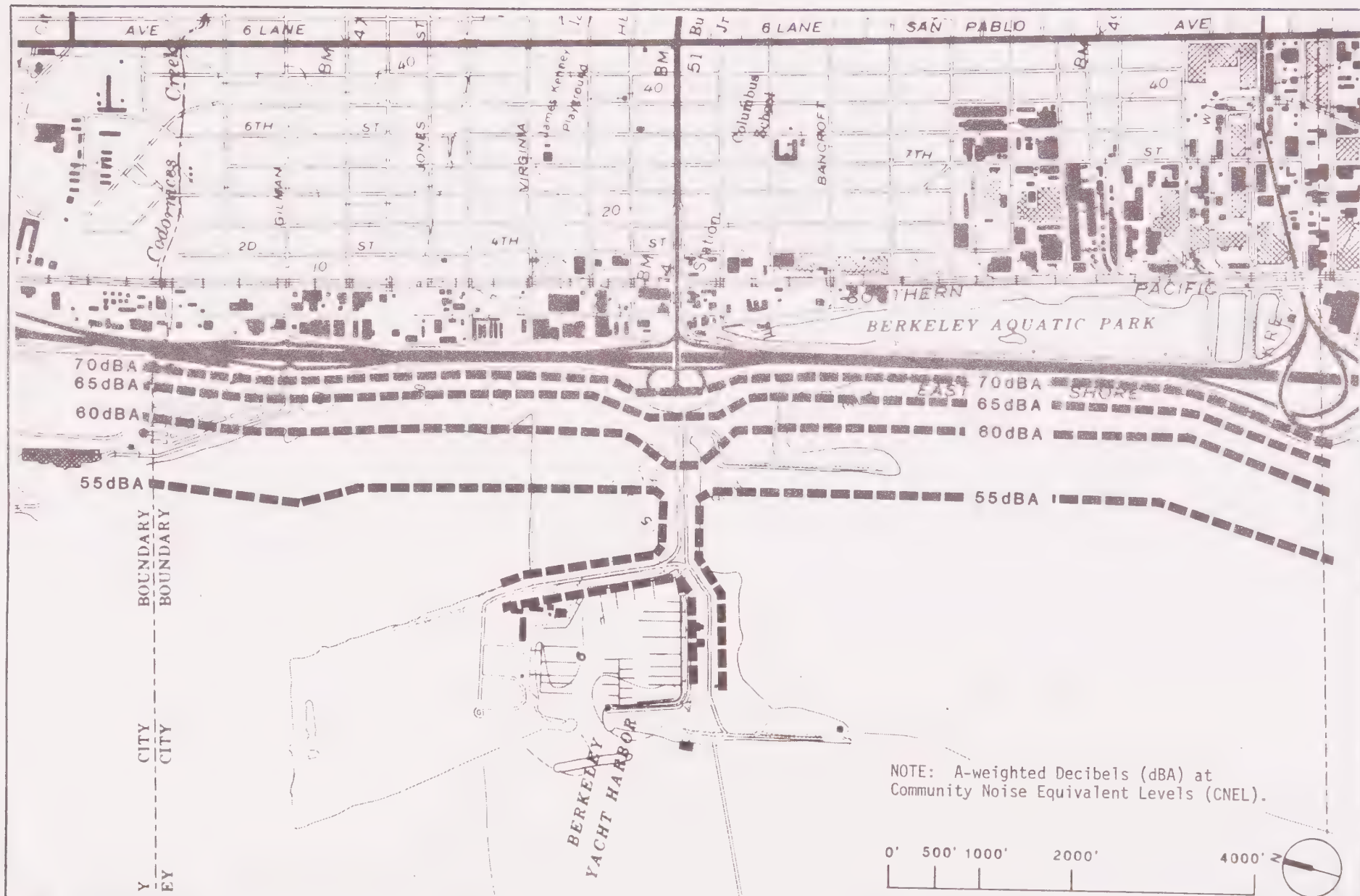
2.6 Policies from the Safety Element

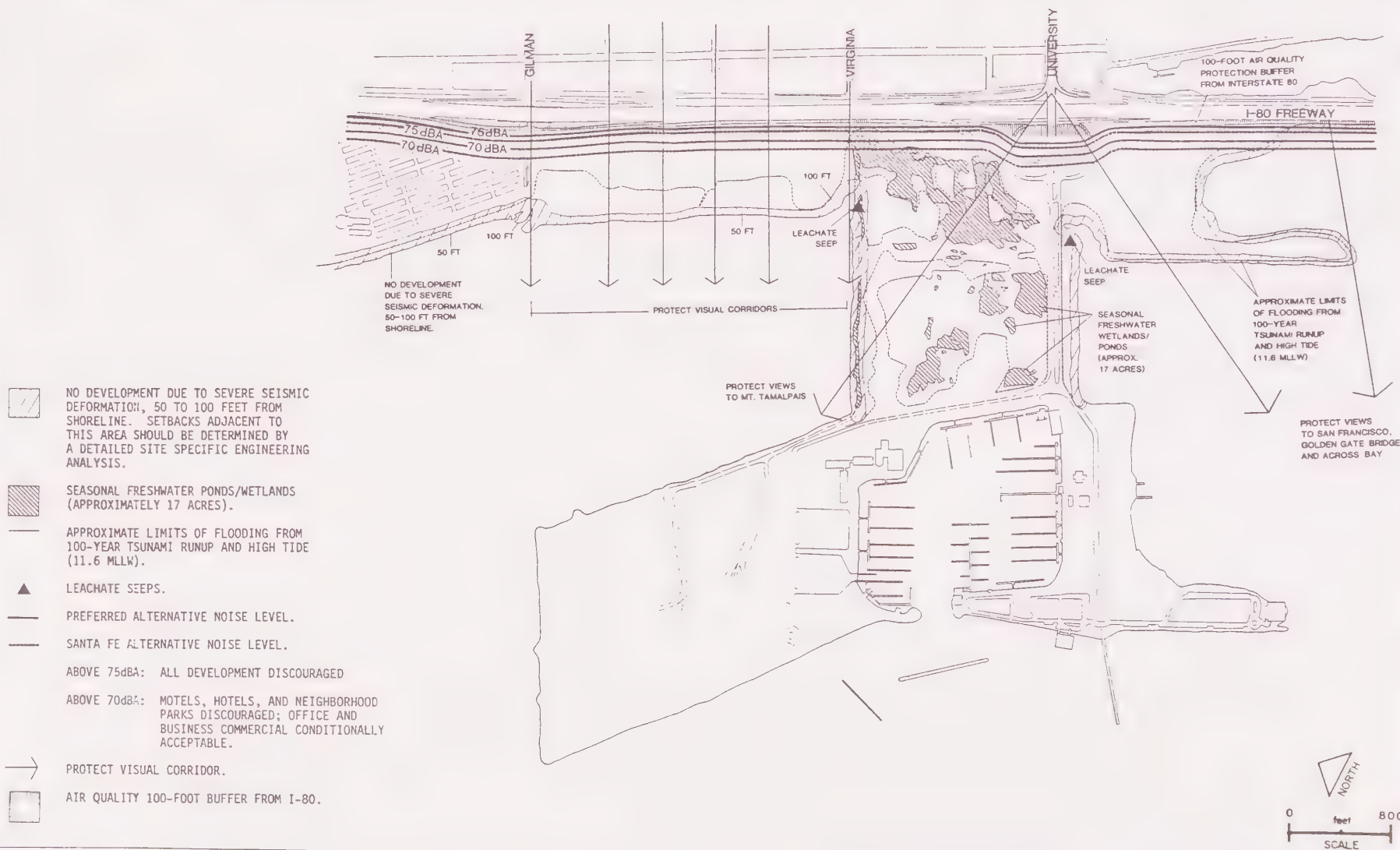
1. Locate structures where there will be the least risk to life and property from seismic hazards: groundshaking, ruptures, liquefaction, tsunami. Generally, confine development to zone 2 shown on Figure 9.

2. Place no structures within a 100-foot setback from the water's edge, to minimize danger from slope failure.

3. Use techniques of design, construction, and building placement to reduce the potential damage from differential settlement and seismic hazards.

4. Provide adequate drainage of the site, to minimize damage from flooding and ponding.





SITE CONSTRAINTS

Figure 8

lsa

5. Fill construction sites or improve dikes to prevent damage from a 100-year flood event.

6. Design relocated creek outfalls to assure adequate storm runoff capacity.

7. Provide improved water capacity to the site and expand other utilities as required to insure fire safety and meet development needs.

8. Include fire prevention and suppression device in all new construction.

9. Provide additional capacity of City Fire and Police departments to meet development needs, if required.

10. Clearly mark evacuation routes in the event of an emergency, at Gilman Street, University Avenue, and Ashby Avenue.

11. Provide for emergency services at the waterfront in the event of isolation from the rest of the City: information centers, medical care, temporary shelters, and Fire and Police Protection.

2.7 Policies from the Community Design Element

2.7.1 General Policies for Community Design

1. Reinforce and reflect Berkeley's history, character, and diversity of lifestyles in the design of structures on the waterfront.

2. Protect and enhance vistas and view corridors to and from the Waterfront.

3. Limit the negative visual impacts of parking by placing it in less visible locations and by landscaping.

4. Design buildings and landscaped areas so that they will be visually interesting and attractive both at the ground level and at a distance.

5. Create an attractive and safe environment which promotes pedestrian, wheelchair, and bicycle use.

6. Design and situate buildings so they will mitigate the noise and air quality impacts of the freeway on wildlife habitats and recreational and open space opportunities.

7. Overcome the barrier created by the freeway, which visually and physically separates Berkeley from its Waterfront, through new crossings for pedestrian/bicycle/wheelchair access.

2.7.2 Design Policies for Development

1. Height of structures should be one to two stories, with occasional heights of three stories.
2. The height of development within the University Avenue view corridor at the Marina Edge should not exceed 25 feet.
3. View corridors down east-west streets to the waterfront should be retained.
4. Architecture and parcels should be diverse rather than monolithic.
5. The Berkeley waterfront should have a pleasing connection to other areas on the East Bay shoreline.
6. Maximum intensity within development parcels should be a floor area ratio of .5 (ratio of building area to site area).
7. Active ground level uses within development parcels should be encouraged adjacent to public access and open space areas.
8. Major parking areas should be set back from public access and open space areas.
9. All roadways and parking areas should be generously landscaped and appropriately lighted.

3. DESCRIPTION OF THE BERKELEY WATERFRONT

The Berkeley Waterfront extends along the eastern shore of San Francisco Bay, from the Interstate 80 freeway on the east to the City-owned marina on the west, and from the Emeryville city limits on the south to the Albany city limits on the north. This 170-acre area, under a single private ownership, except for access rights-of-way, is a uniquely significant location in the Bay Area. It is the City's connection with the Bay, and since it is immediately east of the Golden Gate Bridge it is one of the region's most visually important sites.

This amendment to the City's 1977 Master Plan results from an intensive, highly public planning process which began in January 1984. This process has involved analysis of opportunities and constraints, evaluation of alternatives based on criteria adopted by the City Council, and selection of a preferred alternative on which this Master Plan amendment is based. At each step of the planning process there have been public workshops and hearings. More than \$500,000 has been allocated to date for the preparation of the Waterfront Plan, including funds from the City, the State, and the property owner.

Work on the plan has produced extensive information about the waterfront, as shown in the documents listed in the Appendix. Among the major opportunities and constraints are:

Land Use. Use of the Waterfront presents an opportunity to link the City with the Bay, and to enhance nearby areas. The key obstacle to using these opportunities in the physical barrier of the Interstate 80 freeway.

Public Policy. The major source of public policy for the site is the City of Berkeley's planning and land use regulatory authority. Other regulatory agencies include the San Francisco Bay Conservation and Development Commission, U.S. Fish and Wildlife Service, California Department of Fish and Game, National Marine Fisheries Service, Regional Water Quality Control Board, the California Department of Transportation, U.S. Army Corps of Engineers, and State Lands Commission.

Environmentally Sensitive Areas. Parts of the site have existing or potential wetlands habitat value. Because the site is artificial landfill, mitigation and enhancement programs will be needed to foster natural processes. The fact that the site is in an area subject to earthquakes, together with the soil characteristics of landfill on Bay and mud, means that there must be special care to plan for potential seismic risks.

Recreation and Open Space. The site is an important link in the East Bay shoreline open space and trail system. The waterfront is well suited to accommodate recreational activities for which there are regional and local needs.

Traffic. Transit and automobile access routes to the site are heavily loaded, which severely limits development capacity. CalTrans' proposed Interstate 80 improvements will substantially increase capacity immediately after they are completed, but before the year 2005 regional growth in

travel demand will use that increased capacity, and access will again be restricted. There is a potential for achieving a high percentage of transit use at the site, but this would require developer subsidy.

Utilities and Community Services. Improvements to the sewer system will be required, depending on the amount of development, to improve water quality and increase capacity. The water transmission system will have to be improved, for fire safety purposes. It will be necessary to improve water quality from surface runoff out falls in order to develop Berkeley Beach.

Housing. Development of the waterfront could increase the demand for housing in Berkeley, already in short supply. Exactions from development can be used to help reduce the impact on housing prices.

Economic Development. There is a strong market demand for development of a wide range of uses on the waterfront, including uses which could generate job opportunities targeted to Berkeley needs.

Sub-Areas of the waterfront (for identification and reference) The Waterfront study area also includes 512 acres of privately owned open water tidelands, which adjoin more than 4,000 acres of open water tidelands owned by the City. The filled land west of Marina Boulevard, owned by the City, includes a marina, fishing pier, restaurants, shoreline parks, small office buildings, and a hotel. Spinnaker Way, running east and west at the north edge of the marina, adjoins the North waterfront Park which the City is developing on landfill.

The dry land portion of the waterfront covered by this plan includes the following sub-areas, from south to north (See Figure 10):

The South of the Brickyard Area is a mile-long narrow strip between the Bay and West Frontage Road running from the Emeryville city limits to the Brickyard; total area is 7 acres.

The Brickyard, a landfill composed of clean fill, formerly used for the sale of used brick and now for storage of clean fill, contains 27 acres of landfill immediately south of the University Avenue-Interstate 80 interchange.

The Meadow contains 72 acres in a rectangular landfill bounded by University Avenue on the south, Marina Boulevard on the west, the extension of Virginia Street on the north and the freeway on the east.

The North Basin contains 37 acres bounded by the Bay, the Meadow, the freeway and Gilman Street. The area now includes a paved parking lot leased until 1997 to Golden Gate Fields, a race track just north of the city limits in Albany.

The Stables Area contains 29 acres bounded by the Bay, Albany city limits, the freeway and Gilman Street. The site contains stables serving the race track and is also under lease until 1997.

South Basin, 291 acres of open water south of Virginia Street.

North Basin, 214 acres of open water north of the extension of Virginia Street.

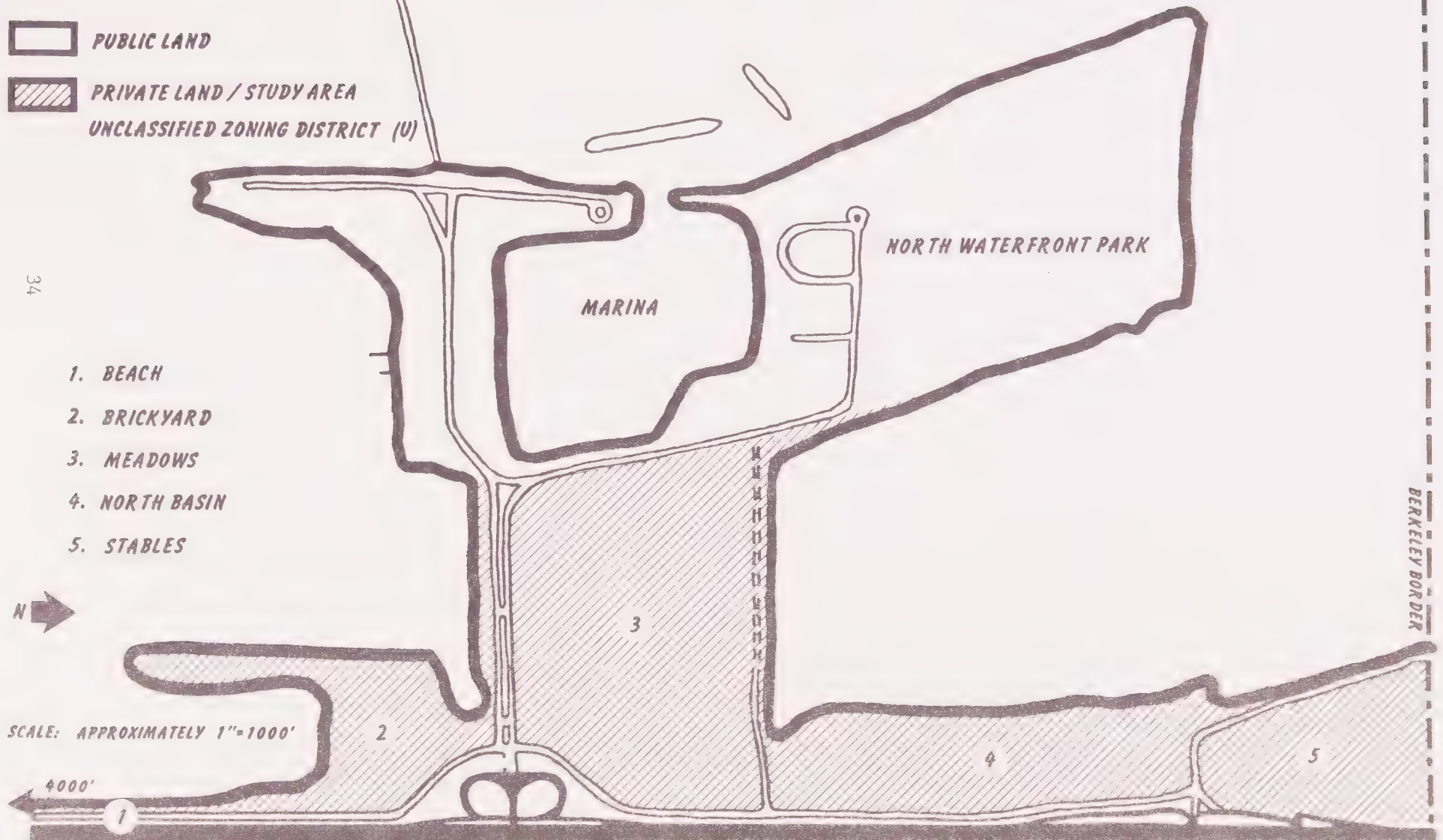
Figure 10

BERKELEY WATERFRONT

Source: Phase 1, Waterfront Planning Process: Report and Recommendations, City of Berkeley, September 1983

LEGEND:

-  PUBLIC LAND
-  PRIVATE LAND / STUDY AREA
- UNCLASSIFIED ZONING DISTRICT (U)



4. PLAN ELEMENTS

4.1 Land Use

4.1.1 Site Description

Site Characteristics

The waterfront has severe environmental constraints on development. The site's position in Bay waters and overlying unconsolidated Bay muds requires careful siting of structures, special design of foundations, protection of shoreline stability, conservation of Bay tidelands and wildlife habitats, and a judicious approach to any use of the surrounding aquatic environment. Climate, winds, and noise from the freeway also constrain the use of the site.

Location and design of development will be greatly affected by the fact that the site is artificial landfill on Bay mud. Development will have to comply with Regional Water Quality Control Board policies to protect the Bay from the leaking of contaminants from the landfill.

Settlement of the site occurs because of underlying unconsolidated Bay mud and compaction properties of the landfill. The rate of settlement will increase at least temporarily from the placement of additional fill and structural loads on the landfill. The Meadow fill will experience more future settlement from applied load than the North Basin Strip or Brickyard. Settlement will occur on the North Basin Strip from past filling and future structural loads, but less than on the Meadow.

Earthquakes and tsunami waves could result in human injury and property damage, with a greater danger on the less stable soils of the Meadow than on the portions of the site near the freeway. Secondary effects such as ground lurching and rupture could destabilize the slopes facing the Bay.

Methane generated by continuing decomposition of the landfill material could be a significant hazard. Venting systems to prevent the accumulation of methane could eliminate this hazard on the Meadow and North Basin Strip.

There are opportunities to protect and enhance the biological value of both terrestrial and marine habitats. On the man-made dry land, new habitats could be developed to maintain existing wildlife and attract more diverse wildlife. On the shoreline, a clean-up of litter and storm drain effluent would improve fish and wildlife habitat. Intertidal and submerged mudflats along the water edge are valuable wildlife areas, particularly for shellfish and water birds. The Meadow contains seasonal wetlands, those with the highest habitat value in the East Meadow near the freeway. Any development that would reduce, eliminate, or disturb these areas would have a negative effect on the area's biological resources. Reduction of riprap wherever possible would increase valuable intertidal areas.

Development along the I-80 corridor would be subject to potentially high concentrations of carbon monoxide, which would preclude sensitive uses such as housing, playgrounds, schools, hospitals and nursing homes. Noise along this corridor will need to be mitigated by special design measures such as noise walls or insulation. Even so, it may be difficult to reduce noise levels in outdoor areas adjacent to I-80 to acceptable levels for certain kinds of uses.

Berkeley's Waterfront lands are separated from the rest of the City by the Interstate 80 freeway. The area is accessible by only three east-west streets: Gilman, University, and Ashby. University Avenue, running all the way from the University of California through downtown to the Bay, is a major symbolic and functional axis of the City.

The total dry land acreage of the Waterfront area includes approximately 170 acres between the West Frontage Road and the Berkeley Marina. Publicly owned lands adjacent to the site include the land around the Marina (66 acres) and the North Waterfront Park (90 acres), as well as several street rights-of-way through the private holdings. In addition to the drylands, approximately 505 acres of submerged and tidal lands are held in public trust by the owner, the Santa Fe Pacific Realty Corporation.

The water bodies surrounding the site are the North and South sailing basins. The North Basin is enclosed by land on three sides and is only four to five feet deep at low tide. It is protected from wave action and subject to siltation. The South Basin adjoins the land areas known as Shorebird Park, the Brickyard Peninsula, and the Berkeley Beach, near Ashby Avenue. It is partially shielded from the predominantly southwest wave action and is a popular location for windsurfing. Between the Peninsula and the Frontage Road is Brickyard Cove, a small embayment that becomes exposed mudflats at low tide.

Of the dry land areas, moving from south to north, the South of the Brickyard Area is from 10 to 100 feet wide. Near Ashby Avenue is a small beach and berm north of the Potter Creek outlet, which can be up to a quarter of a mile long depending on the tides. It is now used for sightseeing, walking and wind surfing. Halfway to University Avenue is the outflow of Aquatic Park. North of the beach the shore is little more than a strip of riprap shielding the shore from wave action. The whole strip from Ashby Avenue to the Brickyard offers excellent unobstructed views of the Bay, though the Brickyard Peninsula obstructs the view somewhat from near the Brickyard Cove area. The views from the Peninsula are equal to those from the Frontage Road.

The Meadow, the largest land mass, consists of 72 acres just north of University Avenue. It measures 1600 feet from north to south, and only the north and south edges adjoin the water. The North Basin Strip is a 400- to 600-foot wide area between the Frontage Road and the North Sailing Basin. Approximately the northern two-thirds (24 acres) is leased to Golden Gate Fields Racetrack for overflow parking. The Stables Area, between Gilman and the Albany border, serves Golden Gate Fields and is also under lease to 1997.

Existing Land Use

Other than the parking and barns serving Golden Gate Fields, a small grocery store at the southwest corner of University Avenue and Frontage Road, and a storage site for earth and construction materials on the Brickyard, there are no developed uses on the private lands of the waterfront.

On adjacent publicly owned lands, the Marina contains a number of commercial and recreational activities. The 90-acre North Waterfront Park is under construction on sanitary landfill north of the Marina. It is planned primarily to provide a natural environmental experience, rather than active recreational opportunities, although bicycle and hiking trails, picnic and camping areas are included. It will include no structures except a park headquarters and restrooms.

Other public recreational facilities include the 1,000-berth Marina Harbor, the six-acre Shorebird Park, three-acre Horseshoe Park, and the Berkeley Fishing Pier.

Private facilities at the Marina include the 300-room Marriott Hotel, three restaurants, three sailing clubs, a sports center, boat repair yard, and small office buildings. All of these are leased concessions on City-owned lands. Immediately east of the freeway is Aquatic Park, a 60-acre public lake and surrounding City park, which was the original shoreline before the highway was built. It is a salt water body having tidal interchange with the Bay through controlled gates under the freeway. Improvements are badly needed to restore water quality and landscaping.

Except for Aquatic Park, the rest of Berkeley between Fourth Street and the freeway is mainly industrial. This land use pattern began when the area was the original shoreline, a good location for factories needing water and rail access. Some of the factories in this area have been abandoned, and a few have been converted to office use. Fourth Street has also developed into a commercial area of restaurants, retail stores, and offices. East of Fourth Street is a mixture of commercial and residential uses.

In Albany the lands immediately north of the study site are leased to Golden Gate Fields until 1997. Still farther north are the Albany Mudflats, 180 acres of habitat for shorebirds and waterfowl. On the east of the freeway in Albany are industrial used and several residential neighborhoods.

Land in Emeryville immediately south of the city limits and west of the freeway is undeveloped mudflats, extending south to the area of commercial development near Powell Street. East of the freeway in Emeryville is an older industrial area and a high-rise condominium structure.

Land Use Policy

The City of Berkeley's 1977 Master Plan designates the Waterfront "for further study" and gives only general principles for planning. However, the plan indicates that downtown Berkeley should be the center of commerce, government, and cultural activities for the City, and it identifies University Avenue and Interstate 80 as scenic routes. A portion of the area east of the freeway is governed by the West Berkeley Redevelopment Area Plan, which calls for a mixture of uses including residential, with a height limit from 35 to 50 feet. The remainder of the area between Fourth Street and the freeway is governed by the provisions of the City's Manufacturing zoning district; they were recently amended to reduce the height limit to 45 feet or three stories, and to require use permits for new construction or conversions involving more than 10,000 square feet.

As of 1986 the City of Berkeley was preparing several other plans; the West Berkeley Area Plan, covering the area from San Pablo Avenue west to the freeway and from Albany to Emeryville; the South Berkeley Area Plan, bounded by Dwight Way, Shattuck, the City limits, and San Pablo Avenue; the Downtown Plan; and a city-wide Transportation Plan, to be the first component of a comprehensive revision to the 1977 Master Plan.

The City of Albany's present General Plan shows the Golden Gate Fields site, immediately north of the City limits, as recreational use. However, the Albany Planning Commission is reviewing a development proposal for the waterfront lands owned by the Santa Fe, including the race track. This development, if approved and built, would have a major impact upon Berkeley's Waterfront, especially near the Gilman Street interchange.

The City of Emeryville, as of early 1986, was reviewing the Bayfront Specific Plan, calling for intensive redevelopment uses for the older industrial area east of the freeway. In addition, new residential and hotel development has been proposed for the area served by Powell Street, west of the freeway.

The San Francisco Bay Conservation and Development Commission's jurisdiction extends 100 feet inland from the point of highest tidal action. The BCDC San Francisco Bay Plan designates the entire west-facing shoreline zone of the site as a waterfront park or beach, and recommends development of public and commercial recreational areas. BCDC policy prohibits fill in the Bay, except for minor fill for improving shoreline appearance or enhancing public access.

In addition to BCDC approval, a permit from the U.S. Army Corps of Engineers would be required for any proposed dredging, filling or construction in or affecting the Bay waters, up to the line of mean high water. Review by the San Francisco Bay Regional Water Quality Control Board to assure that the landfill is not impairing water quality would be necessary for BCDC and Corps permits. The U. S. Fish and Wildlife Service, California Department of Fish and Game, and National Marine Fisheries

Service review development plans affecting water and shoreline areas for impacts on the area's natural and wildlife resources. These agencies may recommend approval or denial of Corps and BCDC permits, as well as conditions and mitigation measures. The City of Berkeley, on behalf of the State Lands Commission, must find that development plans are consistent with the public trust easement which covers all water areas around the site.

Traffic Constraints

Inadequate freeway interchange capacity limits access to the site from the south and to the north during the evening. Northbound congestion between the Bay Bridge and Ashby Avenue causes the diversion of traffic from the freeway to parallel routes such as West Frontage Road, Sixth-Seventh Streets and San Pablo Avenue. The close spacing of intersections serving the Waterfront reduces their capacity.

CalTrans' proposed widening of the freeway through Berkeley will provide initial relief from peak period congestion. However, at some time before the year 2005, traffic demand on I-80 during peak periods is projected to exceed the increased capacity of the freeway.

The existing transit system serving Berkeley and the Waterfront do have unused capacity on local and off-peak transbay routes. The Berkeley TRIP and RIDEs programs develop opportunities for ridesharing. However, key links in the bus and BART lines serving the site are heavily loaded at peak periods.

The capacity of the circulation system of the site is limited by the intersection capacities of Gilman and Ashby Streets and University Avenue, by the capacities of arterial streets in Berkeley, and by the capacity of the freeway, as documented in the Environmental Impact Report. The total amount of development allowed in the plan is based upon the capacity of the transportation system as well as on other environmental and infrastructure constraints.

Utility Constraints

The existing sanitary service to the Waterfront would be incapable of supporting new large-scale development without improvements. Any development on private lands would be responsible for a collection system to get sewage to the 16-inch line under the freeway. The East Bay Municipal Utilities District has estimated that this 16-inch line could accommodate no more than 1,100 residential units or 1.3 million square feet of office space on the Waterfront. Water service to the site would also have to be expanded for fire protection and domestic consumption, depending upon the type of development.

Economic, Market, and Fiscal Considerations

The Berkeley Waterfront benefits from a strong market for development in the East Bay, which can create many opportunities for employment. The net revenues to the City from waterfront development will depend on the types of private uses and the extent of public improvements.

The Waterfront could provide a wide array of job opportunities for Berkeley residents, reduce the need for residents to commute out of the City, broaden the City's employment base, and generate revenues that can be used for job training and other employment programs. Potential constraints on economic development are traffic capacity and the problems of the site described above, together with competition from development in San Francisco, Contra Costa, and south Alameda Counties. It is estimated that the waterfront Plan will generate approximately 1,000 newly-created (as compared with relocated) jobs.

In 1980 Berkeley contained 58,848 jobs, with the highest percentages in educational services, retail, and other professional services. The civilian labor force in 1980 was 54,897, of whom 6.7 percent were unemployed; 43 percent of the unemployed workers were members of minorities. There were high percentages of unemployed people seeking professional, technical and managerial jobs, as well as clerical and office support positions. There has also been an increase in the number of teenagers seeking work. A mixture of uses on the Waterfront could create opportunities for service jobs in recreation and hotels, positions which often require less expertise and training than many office jobs. Retail establishments also offer jobs requiring relatively little advance training or expertise. (See Tables 3, 4, 5, and 6).

The unique location of the site, with access to the East Bay and San Francisco, creates a strong market for a variety of uses. There is a strong demand for housing in the East Bay; however, the cost of building new housing would be high because of site conditions. The site would be attractive for retail uses, especially Waterfront related, such as restaurants and special shops.

There is also a market for hotel and motel accommodations in the East Bay, when currently planned facilities are completed. A small-scale conference center could also be supported, because of the potential association with the University of California. The use would be mutually supportive to nearby hotels.

From a fiscal standpoint, hotel use is the most lucrative source of revenue to the City --over \$5,000 in 1985 dollars per 1,000 square feet. Next is retail, at \$2,415 per 1,000 square feet; office with \$955 per 1,000 square feet; and residential at \$715 per 1,000 square feet. The development of the waterfront will require substantial expenditure for both capital improvements and maintenance. Typically, the surplus of revenue over direct costs associated with the site is highest for hotel development and lowest for park land, with other uses falling generally in the order given above. The reason for these differences is that some private uses, such as housing, require much more expansion of public services relative to the tax revenue they generate for the City.

Table 3

BERKELEY EMPLOYMENT BY INDUSTRY, 1980

<u>Industry</u>	<u>Employment</u>		<u>Businesses</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Agriculture, Forestry Fisheries, Mining	749	1.5	122	1
Construction	1,816	3.5	366	3
Manufacturing				
Non-durable Goods	2,440	4.8		
Durable Goods	1,875	3.7		
Group total			1,220	10
Transportation	1,576	3.1		
Communications, other Public Utilities	694	1.4		
Group total			244	2
Wholesale Trade	903	1.8	610	5
Retail Trade	6,564	12.8%	4,148	34
Finance, Insurance, Real Estate	2,966	5.8	732	6
Services				
Business and Repair	3,018	5.9	-	-
Personal, Entertainment, Recreational Services	2,778	5.4	-	-
Health Services	4,005	7.8	-	-
Educational Services	13,062	25.5	-	-
Other Professional and Related Services	6,016	11.8	-	-
Group total			4,758	39
Public Administration	2,703	5.3	-	-
Total Employment, 16 years & Older	51,165	100%	12,200	100%

Table Notes:

In some cases, businesses were not broken down by subgroups, as was employment. Percentages may not add to 100 due to rounding.

Source: ABAG, 1980 Census Materials, 1980 Census Summary Tape File 3A and Business License Tax, Data Finance Dept., City of Berkeley.

Table 4
Berkeley Occupational Distribution, 1980

OCCUPATION OF LABOR FORCE	BERKELEY		WEST BERKELEY	
	NUMBER	PERCENT	NUMBER	PERCENT
Executive, Administration & Management	6,109	11.9	1,232	9.6
Professional Specialty	15,442	30.2	2,052	15.9
Technical and Related Support	3,885	7.6	667	5.2
Sales	4,085	8.0	972	7.6
Admin, Support, incl. Clerical	8,780	17.2	699	20.9
Private Household	493	1.0	240	1.9
Protective Service	398	1.0	151	1.1
Other Service	5,344	10.4	1,896	14.7
Farming, Forestry, Fishing	538	1.1	176	1.4
Precision Production, Craft and Repair Services	2,964	5.8	1,205	9.4
Machine Operators, Assemblers, and Inspectors	1,261	2.5	631	4.9
Trans. and Material Moving	769	1.5	420	3.3
Handlers, Helpers and Laborers	1,097	2.1	524	4.1
TOTAL	51,165	100.0	12,865	100.0

Table Note:

Totals may vary from other tables because of variation in sources.

Source: ABAG, 1980 Census Materials, Summary Tape File 3A, March 11, 1982.

Table 5

Demographic Characteristics of Persons Registered for Employment

SEX	1983		1984		Percent Change
Male	3,605		4,135		+14.7
Female	3,710		4,065		+ 9.6
TOTAL	7,315		8,200		+12.1

RACE	1983		1984		Percent Change
	Number	Percent	Number	Percent	
White	3,360	50.0	3,290	40.0	- 2.1
Black	2,965	41.0	3,605	44.0	+ 21.6
Hispanic	405	6.0	600	7.0	+ 48.1
Amer. Indian & Nat. Alaskan	40	.5	35	.4	- 12.5
Asian & Pacific Islander	450	6.0	495	6.0	+ 10.0
Unavailable	95	1.2	160	1.9	-0-
TOTAL	7,315	100.0	8,185	100.0	+ 12.1

AGE GROUPS	1983		1984		Percent Change
	Number	Percent	Number	Percent	
15 & Under	5	.06	80	.97	+ 1,500
16-19	210	2.80	730	8.90	+ 248
20-21	390	5.30	475	5.70	+ 22
22-39	5,265	71.90	5,190	63.30	- 1
40-54	1,125	15.30	1,335	16.20	+ 19
55 & Over	320	4.30	385	4.60	+ 20

EDUCATION	1983		1984		Percent Change
	Number	Percent	Number	Percent	
0-7 (years Completed)	185	2	175	2	- 19.5
8-11	920	9	1,300	16	- 5.4
12	3,110	36	3,105	39	- 41.3
12 & Higher	5,635	57	3,350	42	- 40.6
TOTAL	9,850		7,930		

Percentages may not add up due to rounding off.

Source: California Employment Development Department.

Table 6
Occupational Characteristics
of Persons Registering for Employment
with Employment Development Department

	1983	1984
Professional, Technical, Managerial	1,815	1,470
Clerical	1,670	1,780
Sales	235	235
Domestic Services	55	105
Food, Beverage, Prep, Services & Sales	1,020	1,215
Agricultural, Fishery & Forestry	45	75
Processing	135	180
Machine Trades	235	320
Benchwork	145	155
Structural Work	480	465
Miscellaneous	440	625
No Classification	<u>1,040</u>	<u>1,455</u>
GRAND TOTAL	7,315	8,080

Source: California Employment Development Department

4.1.2 Policies for Land Use: See Section 2.1

4.2 Circulation

4.2.1 Conditions, Opportunities, and Constraints

Vehicular Access

Inadequate freeway interchange capacity and congestion on Interstate 80 limit access to the Berkeley Waterfront during the AM and PM peak periods. This congestion causes the diversion of traffic from the freeway to parallel routes such as West Frontage Road, Sixth/Seventh Street and San Pablo Avenue. Diversion places an unnecessary traffic burden on the intersections and interchanges serving the Waterfront. The lack of access to and from all directions at the Waterfront at the Ashby and University Avenue interchanges shifts the demand for northbound access to the freeway to the Gilman and Powell Street interchanges, resulting in an uneven distribution of interchange traffic.

Traffic can only reach the Berkeley Waterfront by passing through one of four interchanges, at Powell, Ashby, University or Gilman. The close spacing of intersections at the Gilman, University and Powell interchanges reduces their traffic capacity.

The California Department of Transportation (Caltrans) plans to modify and reconstruct segments of the I-80 freeway between the Bay Bridge Toll Plaza and the Carquinez Bridge. This includes a widening of I-80 in both the northbound and southbound directions through Berkeley. Changes to the interchanges are also proposed, including a major redesign of University Avenue.

These CalTrans improvements should provide initial relief from the AM southbound and PM northbound congestion, which could be expected to reduce the amount of freeway traffic now diverting to parallel routes. However, before the year 2005, peak period traffic on I-80 is projected to exceed the increased capacity of the freeway because of regional growth trends, and congestion will exceed current levels. Moreover, Caltrans' original design for improvements in Berkeley would actually reduce capacity significantly for both the University and Gilman Avenue interchanges. Therefore, the City's Waterfront Plan recommends changes in the initial Caltrans proposal.

Another major problem is that the CalTrans tentative schedule for the I-80 improvements would not complete the section extending through Berkeley until 1995 at the earliest. Traffic analysis indicates that no new development could be accommodated at the Waterfront with the freeway interchanges in present condition. Therefore, the Waterfront Plan requires traffic improvements by the property owner as a condition of development to meet the City's standards and to match the amount and phasing of development with transportation capacity.

Development in the City of Albany will share the capacity of the Gilman Street interchange, and development in Emeryville will use the Ashby interchange. Potential traffic generation from Santa Fe's Albany lands and traffic from Emeryville's Bayfront will compete for interchange capacity. This competing development could reduce the capacity for Berkeley waterfront development by as much as 50 percent.

Traffic and Circulation

With or without development on the Berkeley waterfront, shortages are projected on I-80 and at several locations along University currently planned capacity improvements are made.

Planning of the pending set of I-80 improvements was based on traffic projections made in 1982 for the year 2005. They were based on the best ABAG land use projections available at that time, but those projections did not anticipate the major development proposals now being considered in Albany, Emeryville, and Berkeley. Even so, CalTrans' forecasts indicated that certain sections of the improved I-80, including the northbound segment between Gilman Street and Buchanan Street, would operate beyond their capacities by the year 2005.

The current estimated completion date for the freeway project is later than originally planned, and CalTrans will be updating its traffic projections, for the year 2010. Those projections, if they account for the development proposals in Berkeley, Albany, and Emeryville as well as ABAG's most recent projections of regional growth, will conclude that the freeway will exceed its planned capacity before the year 2010. If that becomes the case, CalTrans may explore measures to increase the capacity of critical sections, such as the northbound segment from Gilman Street to Buchanan Street. However, given the relatively advanced stage of project design, it is doubtful that major additional capacity would be made available on anything more than a spot basis. The likely approach to widespread capacity shortages would be to rely on the added capacity provided by the planned high occupancy vehicle (HOV) lanes and to count on the projected congestion in the general freeway lanes to induce greater amounts of ride-sharing and transit use.

Improvements required in the Berkeley Waterfront Plan could make minor contributions to the future freeway operation. Plan policies include an aggressive performance-based TSM program, encouragement of ridesharing and transit use, and upgraded public transit service to the site. The Plan also proposes street and interchange improvements in the vicinity of the freeway ramps so that the off-ramp termini function smoothly and traffic backups do not occur on the off-ramps. The proposed relocation of the New Waterfront Road to provide significant spacing from the southbound ramps at University Avenue is one such measure.

The Plan recommends removing the section of Frontage Road between University Avenue and Ashby Avenue, to be replaced with auxiliary lanes on the freeway.

The Plan's transportation improvements would allow the development of all recently approved projects in Berkeley as well as the cumulative development analyzed in the Environmental Impact Report on the plan, together with development proposed for the Berkeley Waterfront. The intersections along University Avenue would operate within their maximum capacities, and at the same or better service levels they operate at today, but they would not operate at level of service (LOS) D or better. To further mitigate traffic impact, and to help attain the City's policy of LOS D at key intersections, transportation systems management programs are recommended for the Waterfront, and should be used in other parts of the City as well.

Transit

Under present transit service conditions, there is available capacity on the 51 line to accommodate growth in the Berkeley Waterfront. Unused capacity is available primarily in the segment of the Route 51 line between the Waterfront and downtown Berkeley. Other segments of this line, beyond the campus, are already crowded. Route 37 (and 37R) also has capacity to accommodate transfers from this 51 line.

The transbay bus routes along University Avenue and the I-80 corridor are already at or near capacity. It would be desirable to add a bus stop serving the Berkeley Waterfront, and to add buses for peak periods. The present master planning effort now under way at AC Transit will evaluate the structure of transit routes. This study may provide an opportunity to to expand service for the Berkeley Waterfront. However, AC Transit has indicated that system expansion to serve the Waterfront would have to be funded by the developer.

The BART lines serving the North Berkeley and Berkeley BART stations are expected to be able to meet the increasing demand for train travel over the next five years. However, the reallocation of BART trains within the system to respond to overcrowding on specific lines will limit the amount of capacity available to serve growth on the Berkeley Waterfront during peak periods.

The Berkeley TRiP Program offers local mechanisms for coordinating transit and ridesharing activities. Waterfront development presents an opportunity to achieve a high proportion of shared rides and transit, funded all or in part by the developer.

Pedestrian, Bicycle, and Disabled Access

Access to the Waterfront for pedestrians, bicycles, and the disabled is highly limited. There are bicycle/pedestrian connections crossing the freeway only along Gilman Street and at University Avenue. The Gilman Street underpass is signed as a bicycle route, indicating that bicycles share the traffic lanes with motorized vehicles. Once on the west side of the freeway, there are no bicycle facilities connecting Gilman Street to University Avenue.

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A bicycle route is designated for east-west travel across the University Avenue interchange, which is the sidewalk on the south side of University shared with pedestrians. Access to a bicycle-pedestrian path beneath the elevated portion of University Avenue is provided at First Street.

Bicyclists and pedestrians must walk across the north bound off-ramp to Eastshore Highway, and up a flight of stairs to reach the sidewalk on the south side of the University Avenue overpass. Bicyclists are required to walk their bikes on the overpass sidewalk and then must cross to the north side of University at West Frontage Road, in order to reach the bicycle/pedestrian path extending to the Berkeley Marina.

Gilman Street provides sidewalks on both sides of the Street under the freeway. However, no sidewalks are provided along West Frontage Road between Gilman and Powell. The extension of Ashby Avenue to the Waterfront is considered a freeway ramp, and access by bicycles and pedestrians is prohibited. None of the east-west routes provides wheelchair ramps at the crosswalks, and the stairs at the University Avenue path prevent wheelchair access.

The proposed CalTrans improvements for I-80 include improvements for pedestrian, bicycle, and disabled access, including a separate two-way ramp over the freeway on the south side of University Avenue. The design of the facilities is more to accommodate recreational needs than possible commuting patterns, which could be done with a strong east-west link between the Waterfront and the Berkeley bikeway network on the east side of the freeway.

Land Use Impacts on Transportation Demand

Various land uses have different impacts on transportation demand. The afternoon peak hour conditions are most critical at the intersections in the vicinity of the Berkeley Waterfront. Hotels generate 7 percent of their trips during the PM peak hour, open space 8 percent, retail 9 percent, and residential 11 percent. On the other hand, offices and conference centers would have as much as 19 and 25 percent, respectively, of their daily trip generation concentrated during the PM peak hour.

Different land uses also vary in their potential for inducing transit and ridesharing use. Office and residential uses are the most likely to do so. Ridesharing can be greatly enhanced through a formal ridesharing or vanpool program provided by employers.

4.2.2 Policies for Circulation: See Section 7.2

4.3 Housing

4.3.1 Conditions, Opportunities, and Constraints

The constraints to housing on the Waterfront are physical and economic. Noise, odors and air pollution from the freeway limit the areas of the Waterfront on which housing can be located. Methane gas odors from the landfill will make upwind parcels undesirable for housing. Other sections of the Waterfront are ecologically sensitive environments on which no development should occur.

Soil conditions on the Waterfront would require costly foundation work which would add to the already high price of new housing. New housing units on the Waterfront are estimated to cost between \$80,000 for a studio and \$125,000 for a two-bedroom unit, up to 26% more than existing units in Berkeley. Annual household incomes would need to be \$32,000 to \$49,000 to afford these units, if no more than 33% of income were allocated to housing. It is estimated that about 25% of Waterfront employees could afford the least expensive units and only 12% could afford the most expensive.

Establishing a Waterfront residential community could have a gentrifying effect on existing neighborhoods, if such a community becomes an upper income enclave. There would be spillover effects that cause land value increases in West Berkeley and the Gilman neighborhood.

The changing characteristics of Berkeley's population directly affect the need for housing in the City. Important factors include a decline in both population and number of households: lower median income than in the Bay Area as a whole, and a dramatic decrease in the number of black families between 1970 and 1980.

Housing rental costs in Berkeley are low compared to the rest of Alameda County although the costs of home ownership are higher than in the region as a whole. Median contract rent in 1980 was \$226 per month for the City and \$249 for the county. This gap has widened in the five years since, as rent control went into effect in Berkeley in 1980, while rents in the rest of the region experienced sharp increases. The mean value for an owner-occupied unit was \$110,750 for the City and \$94,210 for the county.

The Waterfront Area

The following section describes how these housing problems and trends relate to the Waterfront in particular. This profile of the Waterfront area is derived from 1980 Census data for Census tracts 19, 20, 21, 32, and 33. (See Table 7.) Tract 20 encompasses the Waterfront itself, while tracts 21 and 32 are immediately adjacent; tracts 19, 22, 31, and 33 are east of San Pablo Avenue. These tracts are adjacent to the Waterfront, and potentially will experience spillover or gentrification effects from development there.

Table 7
DEMOGRAPHIC CHARACTERISTICS, 1980
City of Berkeley

Variable	City	CT20	CT19	CT21	CT32	CT33	ALL CT	% City
Population(1)	103,328	977	3,721	2,556	2,652	3,339	13,245	13%
White(6)	68,198	536	2,013	724	601	395	4,269	6%
% (6)	66	55	54	28	23	12		
Black(6)	20,770	300	965	1,220	1,601	2,755	6,841	33%
% (6)	20	31	26	48	60	83		
Families(2)	19,239	232	933	615	615	868	3,263	17%
Households(3)	44,704	442	1,737	1,068	1,061	1,528	5,836	13%
65 or Older(8)	11,132	112	523	281	200	613	1,729	16%
%	11	11	14	11	8	18		
Yearly Occupancy(3)	46,319	462	1,790	1,130	1,166	1,568	6,116	13%
Units Occupied(3)	44,704	442	1,737	1,068	1,061	1,528	5,836	13%
Vacant Units(3)	1,615	20	53	62	105	40	280	17%
% Vacant	3.5	4.3	3.0	5.5	9.0	2.6	4.6	-
People per Unit (17)	2.11	2.16	2.14	2.39	2.49	2.18	-	-
Renter Occupied(7)	27,821	247	814	655	753	724	3,193	11%
% Rented	62	56	47	37	65	46	52	
Owner Occupied(7)	16,883	195	923	413	308	804	2,643	16%
% Owner Occ.	38	44	53	39	29	53		
Median Rent(10)	\$226	\$144	\$220	\$182	\$172	\$170		
Median House(9)	\$96,400	\$42,500	\$73,700	\$45,400	\$53,500	\$52,300		
1 Unit/Address(5)	25,725	354	1,426	707	584	1,169	4,240	16%

Table Definitions:

CT: Census Tracts

Yearly Occupancy: Number of year round housing units

Median House: Median value of an owner-occupied non-condominium unit.

1 Unit/Address: Year round housing units with one unit at an address.

Source: 1980 Census Area Profiles, Summary Tape File 1A (CTFLA)
SAC Regional Data Center, March 11, 1982.

Figure 11 is a map showing the location of 1980 Census tracts in Berkeley. Census tract 20 extends from Albany to Emeryville, and is variously bounded by Sixth, Camelia, Dwight and San Pablo Streets. It has a population of 977 persons, significantly less than the other tracts, because of primarily industrial and other non-residential uses. The other four tracts extend as far as Albany on the north, Ashby Avenue on the south, Sacramento Street on the east and Sixth Street on the west.

Census tracts 21, 31, and 33 and portions of Census tracts 20 and 22 have been designated a part of the Neighborhood Strategy Area by the City of Berkeley, to target federal Community Development Block Grant funds to the area considered to have the greatest need. West Berkeley, a rapidly changing section of the City, is the subject of further planning efforts by the Planning Division, which is in the process of creating a West Berkeley Area Plan.

All five Census tracts together contained a population of 15,245, or 24% of the total 1980 population of Berkeley. They account for 33% of the city's black residents, 6% of its white residents and 16% of the over 65 residents. Statistics indicate that the Waterfront area is comprised of neighborhoods with significant numbers of elderly black residents, and thus will be subject to population shifts through turnover of housing. There are 5,836 households and 3,263 families in the Waterfront area. These statistics are presented in detail in Table 8.

Although the number of households in the Waterfront area is proportional to the overall population (13%), there are proportionately more families (17%). Given the higher proportion of families, it is not surprising that the average household size in these tracts is higher than the 2.11 persons per household found in the city as a whole, ranging from a low of 2.16 in Census tract 20 to a high of 2.49 in Census tract 32.

The Waterfront area contains 11% of the city rental housing and 16% of the owner-occupied housing. In all but Census tract 32, the proportion of owner-occupied housing is greater than in the city as a whole, and the proportion of renters is correspondingly lower. Fully 37% (1,346) of the City's 3,655 black homeowner households reside in these five Census tracts, as do 30% (1,557) of black renting households.

Median rent is somewhat lower in all five tracts than the city wide median of \$226. The same is true for the median value of owner-occupied housing: City-wide the median value was \$96,400 in 1980 while it ranged from a low of \$42,500 in Census tract 20 to a high of \$73,700 in Census tract 19. The five tracts contain 16% of the City's detached, one-unit housing and contains 11% (2,731) of the housing constructed in 1939 or earlier.

Per capita income in the five Census tracts is lower than the \$8,462 for the City as a whole, ranging from a low of \$4,973 in Census tract 32 to a high of \$8,075 in Census tract 19. Mean household income is also below the \$18,942 of the City as a whole. Only Census tract 19 is above the \$15,506 median household income of the City as a whole, with \$15,064.

Table 8
HOUSING TENURE AND INCOME, 1980

City of Berkeley

Variable	City	CT20	CT19	CT21	CT32	CT33	GT	
Black Howe Owners	3,655	19	257	253	164	653	1,346	37%
Black Renters	5,161	80	136	266	483	592	1,557	30%
Mean Gross Rent	\$267	\$208	\$263	\$232	\$223	\$206	-	-
Median Gross Rent	\$245	\$166	\$241	\$216	\$217	\$210	-	-
Median Hshld. Inc.	\$13,506	\$12,006	\$15,064	\$12,743	\$8,929	\$10,641	-	-
Mean Hshld. Inc.	\$18,942	\$15,631	\$17,124	\$15,758	\$12,119	\$13,436	-	-
Per Capita Income	\$8,462	\$7,524	\$8,075	\$6,548	\$4,973	\$6,203	-	-
Unit Pre-1939	24,335	176	966	514	471	604	2,731	11%

Table Definitions:

Homeowners and renters refer to households, not individuals.

Hshld. Inc.: Household income.

Unit Pre-1939: Dwelling units built 1939 or earlier.

GT: Grand total for the five Census tracts; percent refers to five tracts as a percent of the city.

Source: 1980 Census Area Profiles, Summary Tape File 3A(ST3A)
ABAG Regional Data Center, March 11, 1982.

**BERKELEY CENSUS TRACTS
1980**

11

NOTE: ALL BERKELEY CENSUS TRACT NUMBERS ARE PRECEDED BY 42: EXAMPLE: 11 = 4211

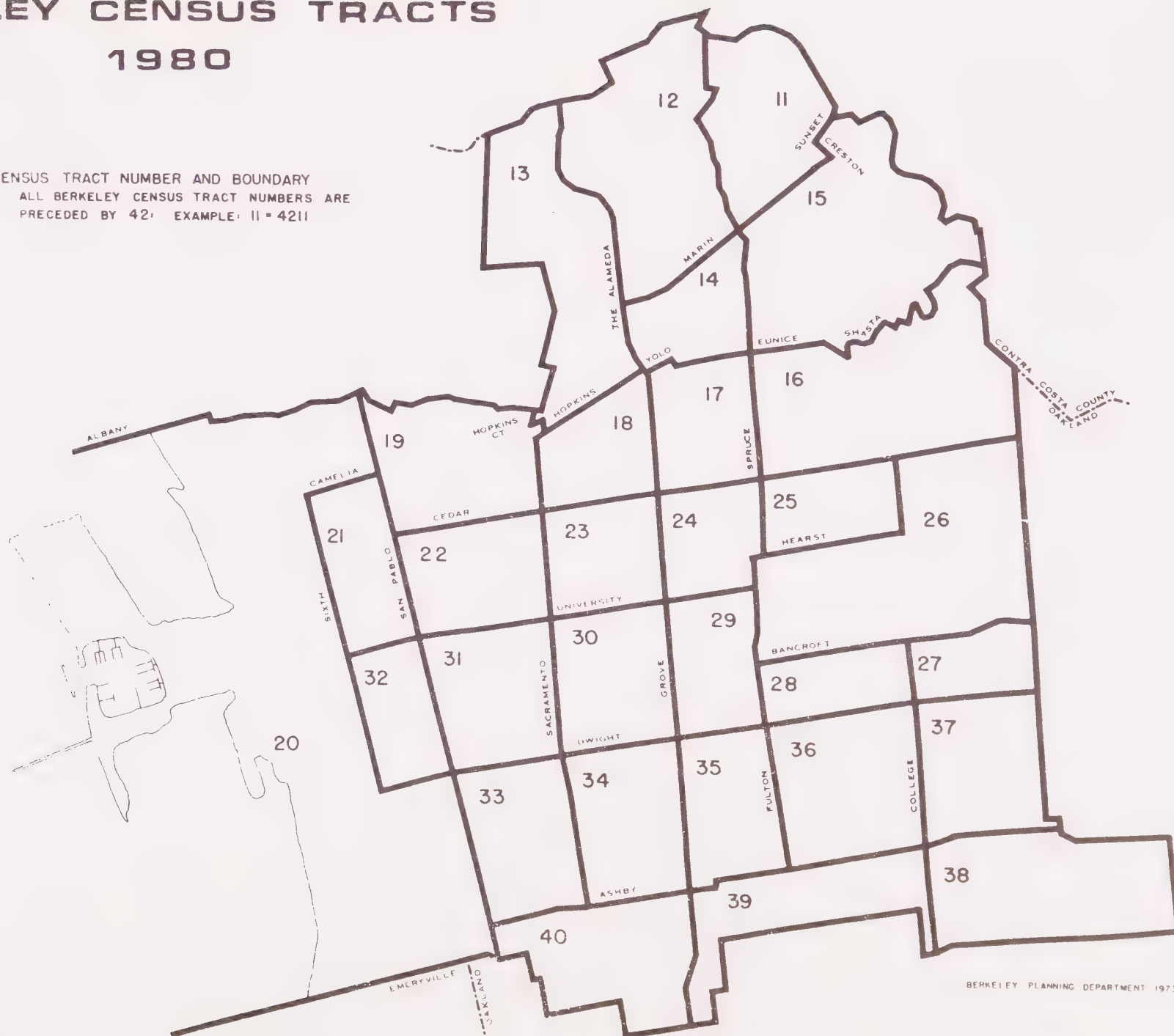


Table 9 shows income distribution in relation to the poverty status standard. For the City as a whole, 14,263 persons had an income in 1979 that was less than 75% of the poverty level. The five Census tracts account for almost 11% (1,525) of these people, the greatest concentration (550) occurring in Census tract 32. Another 11,136 residents of Berkeley had incomes 75% to 124% of the poverty level. Almost 17% (1,890) of these reside in the five tracts, again with the greatest number (526) in Census tract 32. Census tract 19 shows the greatest number of persons (3,140) with incomes of 125% or greater of the poverty standard.

Existing Housing Policies

The City of Berkeley has articulated housing policies and programs in its Housing Element (adopted in February 1985) and Housing Action Strategy (December 1984). The former puts forth an analysis of Berkeley's housing problems along with goals and policies to address housing problems. The latter outlines major actions to be taken by the City to solve housing problems. The findings of each document provide guidance in addressing housing in relation to the Waterfront.

The Housing Element cites affordable housing and the maintenance of existing housing as important problems facing the City. It recognizes the need to expand the supply of housing, although little undeveloped land is available for this purpose, other than the Waterfront. The housing needs of special groups such as low and moderate income Black, Chicano/Latino families, the elderly, students, the disabled and single parent households are of particular concern, as the City places a high value on maintaining diversity in its population. These groups face problems of high housing costs, lack of housing with suitable physical characteristics, low vacancy rates and inadequate neighborhood services.

In order to address the City's housing needs, the Housing Action Strategy recommended that the City takes five major initiatives.

The initiatives are:

1. New Construction - The City should take the measures necessary to increase the supply of new units in Berkeley, consistent with other policy goals.

2. Diversity Maintenance - The City should operate its programs in a manner that allows threatened populations to stay in Berkeley for the long term and maintains the City's diversity. New programs to achieve this goal should be developed.

3. Other Additions - The City should take the measures necessary to increase the supply of housing units through methods other than new construction in a manner consistent with other policy goals.

Table 9
POVERTY STATUS, 1980
City of Berkeley

Poverty Status 1979	City	CT20		CT19		CT21		CT22		CT32		CT33		Total
Below 75%	14,263	93	0.6%	265	1.9%	291	2.0%	308	2.2%	550	3.9%	326	2.3%	12.9%
75-124%	11,136	152	1.4%	295	2.6%	267	2.4%	477	4.3%	526	4.7%	650	5.8%	21.2%
125-149%	4,514	61	1.4%	177	3.9%	154	3.4%	90	2.0%	166	3.7%	164	3.6%	18.0%
150-199%	8,771	168	1.9%	444	5.0%	219	2.5%	290	3.3%	361	4.1%	318	3.6%	20.4%
200-Above	56,635	507	.9%	2,519	4.4%	1,583	2.8%	1,941	3.4%	1,030	1.8%	1,863	3.3%	16.6%

Table Note:

The percentages in the first column refer to the income of persons in relation to the poverty level.

Source: 1980 Census Area Profile, Summary Tape File 3A(STF3A)
ABAG, Regional Data Center, March 11, 1982

4. Rental Rehabilitation - The City should direct its rehabilitation programs to renter-occupied, as well as owner-occupied units.

5. Demand Generators- The City should assure that major demand generators provide housing to mitigate their impact on the Berkeley housing market.

The City has undertaken and/or proposes to commence a wide array of programs that respond to the general problem of the gentrification of Berkeley. These programs are available to offset whatever gentrifying effects that Waterfront development may cause. These programs range from rent control to low income public housing to mortgage revenue bonds for purchase of single family housing. In West Berkeley, the City is undertaking a rehabilitation program involving vacant units. One project is in the Delaware Street Historic District, where 12 vacant units will be restored for residential and commercial uses. Two additional infill structures will be developed with 26 dwelling units; 19 for home ownership and seven Section 8 rental units. Residential development to be located between Hearst, Cedar, Fourth and Fifth Streets is currently under study, and is expected to result in the rehabilitation of 15 buildings and the construction of two to eight new units on vacant lots.

The Residential Rental Inspection Program is also active in West Berkeley. This systematic code enforcement program requires owners to make housing repairs, and has resulted in about 500 inspections city wide on an annual basis. Rent control assures that these improvements will not cause displacement which could otherwise occur as improvements are made.

A part of the residential area near the Waterfront will receive funds for housing improvement under the Rental Rehabilitation Program. Specifically, this program involves the Neighborhood Strategy Area between Delaware and Cedar Streets. Under this program, it is expected that at least 86 units will be rehabilitated. As this is a matching program, the \$5,000 maximum per unit from the program must be matched with a like amount of private funds. Other programs in the Neighborhood Strategy Area are Section 312 loans for rehabilitation of single and multiple family low and moderate income housing and the Municipal Loan Program for rehabilitation of low income primarily owner-occupied housing.

Housing Opportunities

Development of the waterfront may increase demand for housing and have spillover effects on neighborhoods adjacent to the Waterfront. If new housing is not provided as an offset, commercial development will have a spillover effect on existing neighborhoods. This could manifest itself in gentrification. Thus, one initiative in the Housing Action Strategy is to require demand generators to provide the housing for which they are responsible.

The housing demand generated would depend upon how many job holders seek housing here. Some Waterfront employees will already reside in Berkeley, others will make a residence change as a result of a job location change, and others who now live in Berkeley will move out of the City after they start working on the Waterfront.

Over the long run, residence patterns for Waterfront employees may approximate the historical residence patterns of Berkeley workers. In 1980 Berkeley provided 55,400 public and private jobs; of these 40% were held by people who live in the City and 60% were held by those who commute into the City. If these proportions hold true, the approximately 1,000 new employees estimated to work on the Waterfront will generate a need for 400 additional housing units in Berkeley.

If it is assumed that commercial developers on the Waterfront will be required to assist in the provision of housing beyond the level needed to offset housing demand induced by the development, there will be opportunities to produce housing to serve existing and projected need. ABAG has provided estimates for the existing need in Berkeley today, and the projected need. Existing need as of 1980 was 761 for the City, while projected need (1980-1990) is 1,611. Commercial development on the Waterfront could provide resources for a part of this needed new construction, depending upon the financial feasibility of the exactions.

There are a variety of other mechanisms to produce housing that can be combined with programs already on the books -- programs with deep subsidies such as public housing; programs with shallow subsidies such as below market rate mortgages subsidies under mortgage revenue bonds; programs to help special groups such as adding space to existing buildings to provide family housing or second units; and new programs such as establishing a housing fund to be spent as the City sees fit to implement the Housing Strategy, to replace disappearing federal funds.

Likewise, there are a variety of programs that can be funded through developer exactions to foster neighborhood preservation, whether needed as a result of gentrification threats or other causes. These include the Rehabilitation Loan Matching Program, code enforcement inspections, the Municipal Loan Program and the Rental Rehabilitation Program.

4.3.2 Policies for Housing: See Section 2.3

4.4 Conservation/Recreation/Open Space

4.4.1 Conditions, Opportunities, and Constraints

Soils and Geology

Because the site is on landfill, it will settle due to the properties of underlying unconsolidated Bay mud and compaction. The rate of settlement will increase temporarily during development, as additional fill and structural loads are placed on the landfill. Structures on the Meadow would require more elaborate foundation design than on other portions of the site, and would also require more filling to raise the ground surface elevation. The Brickyard requires no additional filling before development, because of the nature of the fill material. Settlement is not expected to occur there from either past or future loading.

Settlement occurs at different rates and amounts on landfill, depending upon the composition of material and their degree of consolidation, decomposition, and compaction. Differential settlement is more likely to continue at the Meadow than at the North Basin Strip, and is least significant at the Brickyard. Utility lines and structures require special design and construction to resist damage from differential settlement.

Earthquakes and tsunami waves could result in human injury and property damage at the site. Proper design and construction of buildings will reduce the potential for damage. Secondary effects such as ground lurching and rupture could destabilize the perimeter slopes facing the Bay. Structures should not be placed there.

Methane generated by continuing decomposition of landfill material could be a significant hazard at the site. Large expanses of pavement will promote the accumulation of methane, increasing the hazard of ignition or explosion of the gas. Open, unpaved areas will facilitate venting of the gas, reducing this hazard. Detectable amounts of methane have accumulated at the North Basin Strip, and methane generation can be expected at the Meadow. The rate of methane production is probably decreasing because of the age of the fill material. The Brickyard does not generate significant amounts of methane. Venting systems to prevent the accumulation of methane will eliminate this hazard at the Meadow and North Basin Strip.

The extensive shoreline of the site is almost entirely riprapped. While it may currently be needed in most areas, it should be minimized whenever and wherever possible. Beaches could be developed along parts of the shoreline to create new opportunities for water-related recreation in Berkeley. It may be feasible, under some beach designs, to remove much of the riprap along the Frontage Road and the Brickyard. A beach could probably be constructed using nearby sand sources. A preliminary study of sediment from the Ashby Shoal indicates that there is suitable material.

But man-made beaches at any site could be subject in varying degree to erosion by waves and currents. For example, instability and erosion of the man-made Shorebird Park in Berkeley has resulted in the loss of \$100,000 worth of imported large grained beach sand. Similarly, Crown Beach in Alameda has been shown to be unstable without the continued supply of new sand. Similar problems may occur at the Berkeley site if a beach is constructed at a location which is exposed to lateral wind and wave erosion. However, the existence of the small beach at Ashby Avenue provides testimony that a stable beach design can be developed even without a continual introduction of new sand. A study to assess the long-term stability of various designs should be undertaken before constructing a wet beach at any location.

Alternatively, a dry beach, protected from wave erosion by a seawall, could be constructed at any of the possible sites. However, the physical separation of the beach and Bay water may detract from the recreational value of the beach and there may be problems with blowing sand if the berm is extensive and unvegetated.

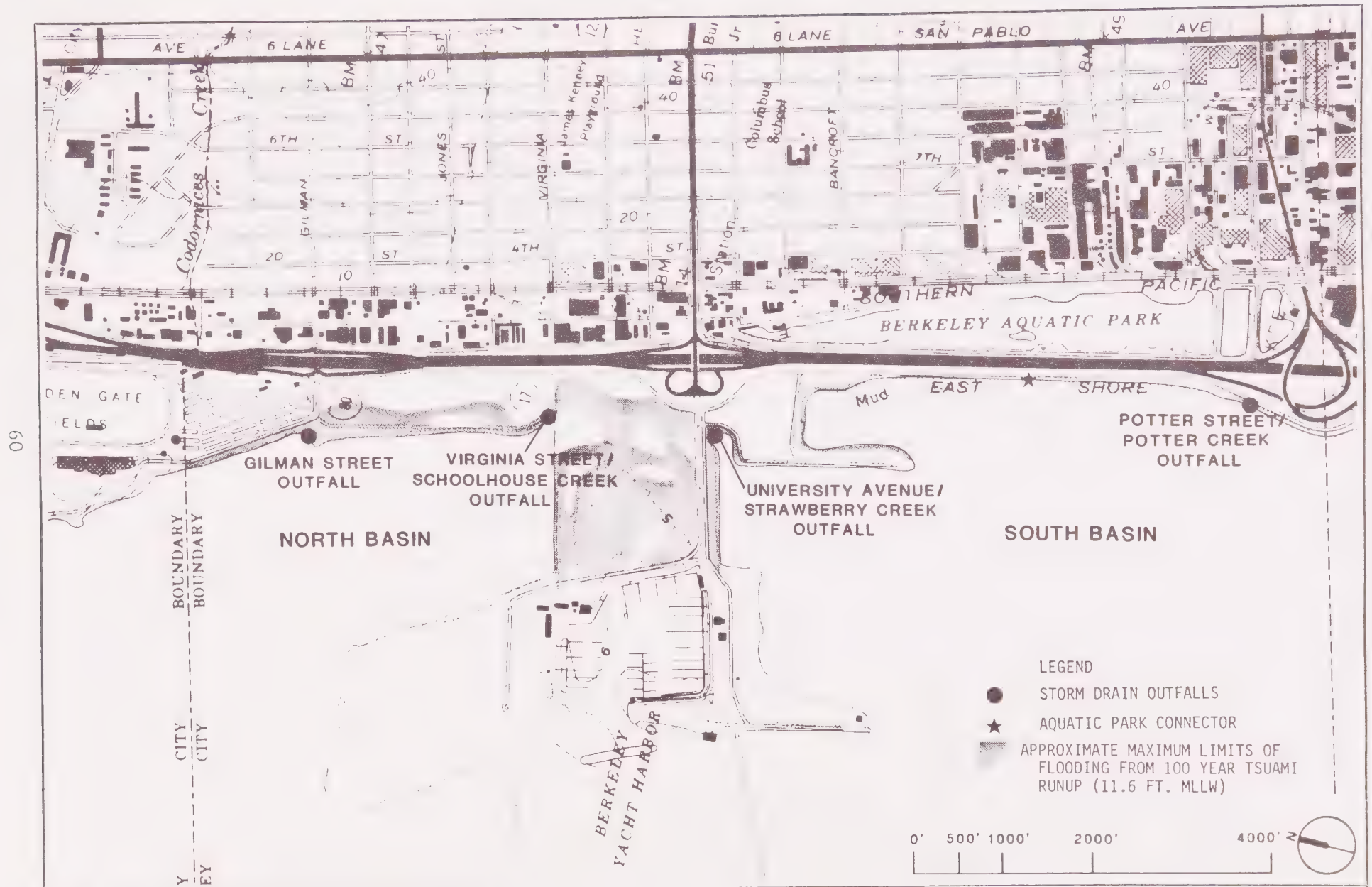
Constructing a seawall will increase the initial cost of a beach but reduce future expenses for beach replenishment and stabilization; an intertidal ("wet") beach will be less costly initially, but may impose higher maintenance costs. Either a "dry" or "wet" beach will require a fill permit from BCD and the Army Corps of Engineers.

Hydrology, Drainage, and water quality (See Figure 12.)

The extensive Bay shoreline of the site offers a potential for numerous kinds of water-related recreation, such as boating, fishing and swimming. A beach, as suggested above, would greatly enhance the present shoreline for recreational activities. However, the poor quality of Bay water in the site vicinity may limit water-contact recreation. This constraint may be mitigated either by locating the beach away from sources of pollution, or by improving the quality of water discharged by the creek and storm drains in the vicinity, and into the Bay at the Berkeley Marina.

A monitoring program of water quality in the vicinity could identify the areas of best water quality where body-contact water recreation would be safest. These probably occur along segments of the shoreline that are farthest from the outfalls of Codornices, Schoolhouse, Strawberry and Potter Creeks. Alternatively, the outfalls of the creeks could be extended farther into the Bay or moved laterally to discharge at a safe distance from water recreation areas.

The outflow from the storm sewers theoretically could be treated before release into the Bay. However, treatment of storm runoff would probably be infeasible because of the cost and lack of available treatment capacity. Control of this pollution at its source is very difficult, since the sources of urban pollution and runoff are so widely distributed



throughout the urban watershed that is drained by the creeks. Regular cleaning of streets, catch basins, and storm sewers, and enforcement of anti-dumping ordinances could improve the quality of water discharged by storm outfalls. Public education is necessary, however, to decrease littering, illegal dumping of wastes into storm sewers, and improper disposal of animal wastes.

Installation of sand filters at creek outfalls could supplement the benefits of more effective pollution source control in Berkeley, and improve the quality of near-shore water. Filters do require proper maintenance and periodic cleaning to function properly.

The site is susceptible to flooding from high tides and tsunamis. Portions of the Meadow and North Basin Strip will be unsuitable for placement of structures until filled to acceptable elevations. Flooding could also be prevented by raising the level of perimeter dikes at the site.

The presence of subsurface leachate at the site prevents the use of ground water at any locations on the site.

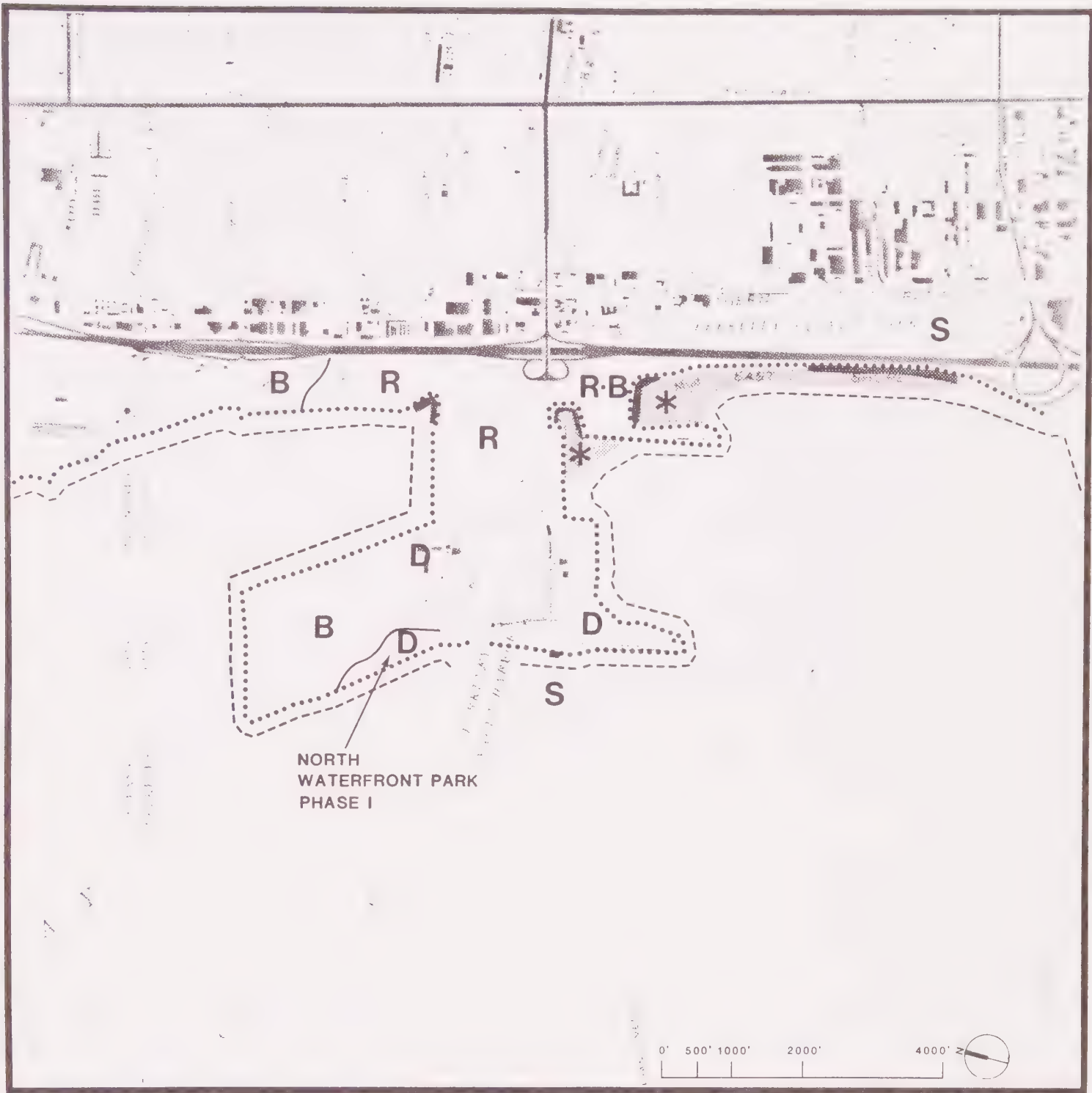
Proper grading to create positive drainage, and an effective storm drainage system will be necessary on developed portions of the site. Undeveloped portions will also require effective drainage of minimize water infiltration and generation of leachate in the landfills. The proximity of the Bay to the site provides a convenient body of water for the discharge of runoff. However, urban pollutants in runoff from the site will further deteriorate the quality of near-shore water if allowed to drain into the Bay without at least minimal treatment (e.g., sand filters).

Biological Resources (See Figure 13.)

Several important opportunities exist within the project area to protect and enhance the biological value of both terrestrial and marine habitats. On the existing man-made uplands, at present a mix of ruderal ("weedy") and barren, littered areas, new habitats can be developed, ranging from fully landscaped to "semi-natural" areas which could maintain existing wildlife as well as attract more diverse wildlife. Areas in the Berkeley Marina and the completed portion of the North Waterfront Park, neighboring the project area on the west, serve as examples of some of the successful landscaping approaches that are available, using native or naturalized plant species.

The Meadow, particularly the East Meadow, and the Brickyard contain seasonal ponds which are an important habitat for migrating shore birds and water fowl.

The opportunity to protect and enhance the area's wildlife use do not totally preclude development if land uses and development sites are carefully selected, separated, and buffered. However, there are some clear and potential constraints to development, if habitat is to be maximized. If most of the existing upland areas are developed and/or landscaped, ruderal vegetation and its associated wildlife will be displaced. This weedy cover provides useful habitat for a number of common bird and animal species.



WILDLIFE HABITATS

Figure 1 3

Legend

- | | | |
|-----------------------------|-------------------------------------|--|
| - Mudflat Intertidal | - Heavily Rip-rapped Shoreline | D - Developed/Landscaped |
| - Beach | R - Ruderal - weedy | S - Important Shorebird Roost |
| --- - Subtidal (mud bottom) | B - Barren | * - Identified as Potentially Suitable for Marsh Establishment (WESCO Report, 1982) |

SOURCE: Environmental Science Associates, Jan. 1985,
WESCO 1982, CHNMB Associates July 1981.

BERKELEY WATERFRONT PLAN

ROMA
Planning and Urban Design

Anthony/Fleming Associates
Community Involvement

ESA
Environmental Assessment

DKS Associates
Transportation

McGuire and Company
Market and Fiscal Analysis

PAD
Social Analysis

Wilson-Porter
Civil Engineering

Exposure to persistent wind and salt air conditions, as well as the soil conditions, will constrain the plant species that can be used to landscape developed and open space areas. However, both native and naturalized plants have been used successfully in landscaped areas of the Berkeley Marina.

Similarly, the shoreline exhibits great potential for protecting and improving fish and wildlife habitat and recreational use. Generally, a cleanup both of litter and of water quality from storm drain effluent entering the project area would be a step toward improving existing habitat. More elaborate proposals to create or expand habitats by introducing mixed structural and vegetative assemblages could increase the ecological values of the shoreline area, but will have to be carefully designed. Possible enhancement projects include: mudflat enhancement and encouragement through revegetation of a salt marsh in Brickyard Cove; creation of a bird refuge by cutting off the southern tip of Brickyard spit as an island and creating diversified "niches"; and creation of transition buffer zones between lands along the North Basin and South Basin strips.

Intertidal and submerged mud flats along the site's water perimeter are valuable wildlife areas, particularly for shellfish and water birds. Particularly in the fall, winter and early spring, water fowl and shore birds make heavy use of the shallow Berkeley shore and water areas. Any development that would reduce or eliminate these areas or disturb wildlife during peak periods of use would adversely impact the area's biological resources, either temporarily or permanently. Activities that may alter the existing mud flats include: any dredging; filling to create beaches; attempting to establish a salt marsh in the northeast corner of Brickyard Cove, at the expense of the mudflat (which, in itself, is a highly productive intertidal habitat) should be carefully considered.

In addition, wildlife use of the water-related portions of the project area, specifically by water birds in Brickyard Cove, would constrain the types of land uses that would be appropriate for adjacent areas, and may dictate the need for buffer zones. For example, plans to provide a beach for public recreation use in or adjacent to Brickyard Cove may conflict with water bird use. Bird numbers in this area increase in August and remain high through spring, leaving only a few months in late spring and the first half of summer when birds use it relatively low and when conflicts between human and bird activities would be minimal.

Finally, continued poor water quality at storm drain outfalls could detract from shoreline habitat enhancement efforts.

Climate and Air Quality

Because of the persistent west wind, buildings should be aligned in a north-south orientation, forming interior corridors and courts that are sheltered yet exposed to the south for sunlight. To minimize infiltration of cool air, doorways should be located on the east or interior side of the buildings. Landscaping should include dense trees and shrubs that could serve as windbreaks.

Development along the I-80 corridor will be subject to potentially high concentrations of carbon monoxide. This could restrict developments to non-sensitive uses, since the measures to reduce carbon monoxide concentrations are limited. "Sensitive uses" generally include residential areas, playgrounds, schools, hospitals and nursing homes.

Recreation and Open Space

Following is a summary of the needs and opportunities for the recreation/open space categories which could be located on the Berkeley Waterfront. Because of the size of the site, its strategic location and accessibility, a future park is likely to serve more than the local Berkeley population. Therefore, recreational and open space uses could help meet both regional and local needs. The shoreline itself is a key link in a potential East Bay trail/open space systems.

Environmental Preserves. The mudflats at Brickyard Cove and the stream outlets have a potential for enhancement as marshland wildlife habitat.

Sports Facilities. The Waterfront provides opportunities for both structured playing fields and open meadows suitable for informal games.

Boating/Marina Facilities. The need for such facilities as launching areas, temporary mooring, and marina is growing with boat ownership in the Bay. Berkeley has the advantage of a very centralized, accessible marina.

Social/Educational Activities. The Waterfront offers opportunities for an interpretive center as part of a Brickyard nature preserve, a public conference center, an outdoor theater, and a public marketplace.

Fishing/Beach Activities. Fishing, swimming, wind surfing, sun bathing, jogging, strolling, and beach games are popular recreational activities which could be incorporated at the Waterfront, subject to environmental, design, and cost considerations.

Overnight Lodging/Camping. The State Parks Department has identified a regional need for individual camping sites and group camping, and for a hostel complex (30 to 100 overnight visitors), and a conference center (seating capacity 3,000 and overnight accommodations for 700) elsewhere on the Waterfront.

4.4.2 Policies for Conservation/Recreation/Open Space: See Section 2.4

4.5 Noise

4.5.1 Conditions and Constraints

The Waterfront is subject to noise from automobile and truck traffic, railroad and industrial operations, and natural sources such as wind.

The major source of continuous noise levels in the area is the heavy traffic on the Interstate 80 freeway, and on major arterials and collectors such as University Avenue, Gilman Street, and Ashby Avenue. I-80 adjacent to the project site carries up to about 204,000 vehicles per day. The major source of intrusive noises lasting for shorter periods is train traffic with the Southern Pacific Railroad tracks one quarter mile east of the project site.

Environmental noise is measured in units of dba, or A-weighted decibels. This is a scale of noise measurement which approximates the range of sensitivity of the human ear to sounds of different frequencies. On this scale, the normal range of human hearing extends from about 10 dba to about 140 dba. A 10 dba increase in the level of a continuous noise represent a preceived doubling of loudness; a 2 dba increase is barely noticeable to most people.

Human response to noise is subjective, and varies considerably from individual to individual. Effects of noise, at various levels, can include interference with sleep, concentration, and communication; physiological and psychological stress, and even hearing loss. Noise levels are often classified according to the following scale: 30 dba, very quiet; 45 dba, quiet; 70 dba, loud; 95 dba, very loud; and 120 dba, painfully loud. The sound level of speech is typically about 60 to 65 dba. In general, noise begins to interfere with a listener's understanding of speech when it exceeds 55 to 60 dba. Sleep disturbance occurs when interior noise levels exceed 40 to 50 dba. Hearing damage occurs at a level of 90 dba over an eight-hour period.

Environmental noise fluctuates in intensity, and is typically described by a time-averaged noise level. Several descriptors of noise are available. The two used here are Ldn and CNEL. Ldn, the day-night noise level, is an index based on a 24-hour average of the energy content of the noise, with a 10-dba "penalty" added for night-time noise (10 p.m. to 7 a.m.) to account for the greater sensitivity to noise during these periods, because of lower ambient levels. CNEL, the Community Noise Equivalent Level is similar to the Ldn, but adds an additional 5-dba penalty to evening noise (7 a.m. to 10 p.m.). In practice, Ldn and CNEL descriptions of the same noise sources usually differ by less than 2 dba.

Noise levels at the Waterfront follow contours parallel to I-80, ranging from in excess of 75 dba CNEL along I-80 to less than 60 dba CNEL in the western portion of the Meadow. The 75-dba CNEL contour is located about 100 feet from the freeway right-of-way; the 70- to 75- dba CNEL zone is about 100 feet wide; the 65- to 70-dba CNEL zone is about 400 feet wide;

and the 60- to 65- dba CNEL zone is about 850 feet wide. The 60- to 65- dba CNEL zone also includes strips alongside University Avenue and Marina Boulevard. During frequent times of relatively high westerly winds (in excess of 15 mph), noise levels on the west side of I-80 are 5-10 dba lower than they are on a calm day. This effect was included in the above estimates. (See Figure 7, and Figure 8.)

Noise Regulations and Planning Guidelines

California Administrative Code Title 25 requires that for multi-unit residential buildings (including hotels, motels, apartments and dwelling units other than single-family detached units), the annualized interior CNEL not exceed 45 dba. Such residential buildings proposed for sites having an existing exterior CNEL of 60 dba or more must be analyzed to ensure that the structures would effectively reduce exterior noise levels to an interior CNEL of 45 dba or less.

The City of Berkeley's Noise Element of the Master Plan (1977) establishes Land Use Compatibility Guidelines for Community Noise which are shown in Table 10. According to these guidelines:

Over 85-dba Ldn: Development within this zone should be discouraged. Industrial uses would be possible, but other uses would require extensive acoustical isolation.

70- 75-0dBA Ldn: Offices, commercial, and professional uses could be developed, with acoustical isolation such as fixed glazing (possibly sound rated), and mechanical ventilation. Development of residential uses is possible but would require extensive acoustical isolation.

60- to 70-dba Ldn: All uses could be developed with no special acoustical treatment.

The degree of noise reduction required for particularly noise sensitive uses could be reduced by locating such uses farther from I-80 and constructing other buildings, containing less noise-sensitive uses, between them and I-80. The degree of shielding provided would depend on the buildings' height and spacing. Shielding can also be provided by constructing landscaped berms or sound walls.

Table 10 LAND USE COMPATIBILITY GUIDELINES FOR COMMUNITY NOISE IN BERKELEY

Land Use Category	Community Noise Exposure Category/a/			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential-Low Density Single Family, Duplex, Mobile Homes	up to 60	55 - 70	70 - 75	75+
Residential-Multi Family	up to 65	60 - 70	70 - 75	75+
Transient Lodging- Motels, Hotels	up to 65	60 - 70	70 - 80	80+
Schools, Libraries, Churches, Hospitals, Nursing Homes	up to 70	60 - 70	70 - 80	80+
Auditoriums, Concert Halls, Amphitheatres	--	up to 70	--	65+
Sports Arena, Outdoor Spectator Sports	--	up to 75	--	70+
Playgrounds, Neighborhood Parks	up to 70	--	67.5 - 75	72.5+
Golf Courses, Riding Stables, Water Recreation, Cemeteries	up to 75	--	70 - 80	80+
Office Buildings, Business Commercial and Professional	up to 70	67.5 - 77.5	75+	--
Industrial, Manu- facturing, Utilities, Agriculture	up to 75	70 - 80	75+	--

/a/ Noise levels under each category are given in dBA, Ldn.

SOURCE: City of Berkeley Planning Department, The City of Berkeley Master Plan, 1977, p. 174.

4.5.6 Policies for Noise: See section 2.5

4.6 Safety

4.6.1 Conditions and Constraints

Three kinds of natural hazards could potentially affect the Waterfront: earthquakes, floods, and fires. Because the Waterfront is physically separated from the rest of the City by the Interstate 80 freeway, people on the site could be isolated from city-wide services in the event of an emergency. The information and policies for safety in the City's Master Plan, as it is updated and revised, are applicable to the Waterfront, as well as the rest of the City.

Earthquakes

The San Francisco Bay region is highly prone to seismic activity. The San Andreas fault, 16 miles west of the waterfront, could generate an earthquake of magnitude 8.3 on the Richter Scale. The Hayward fault, 2.5 miles east, is considered capable of generating a 7.5 earthquake. Earthquakes of these magnitudes would produce severe ground shaking on the site. The fact that the Waterfront land consists of fill on Bay mud causes special seismic problems, since this type of soil shakes with the greatest intensity during earthquakes.

In the event of a major earthquake, the slopes immediately adjacent to the water would become unstable and slip into the Bay. Land deformations such as lurching and settlement would occur, depending on the thickness of Bay mud. Average deformations may be as high as 10 feet and the zone of deformation may be about 100 feet wide for Bay mud 50 feet thick. As shown on Figure 9, the Brickyard, North Basin Strip, Stables area, and southern part of the Meadow are more stable, with up to 30 feet of Bay mud and landfill, while the northern part of the Meadow is less stable, consisting of 30 to 60 feet of Bay mud and landfill.

Floods

Flooding can occur as a result of overflow from the Bay during very heavy storms and high tides, swelling of creeks, overriding of curbs, and dam failure. In addition, seismically induced sea waves or tsunamis associated with a major earthquake could flood the Waterfront plus small parts of west Berkeley. The creeks which drain the eastern parts of the City and flow through the Waterfront are School House and Strawberry which are contained in underground culverts, and Codornices, which is in an open channel. They would be unlikely to overflow unless they were redesigned to flow as natural channels. Dams and reservoirs in the Berkeley Hills could collapse due to landslides or strong ground shaking during earthquakes, releasing a huge volume of water to inundate downstream development.

Figure 14 delineates the flood hazard areas of Berkeley during a 100-year flood, based on a 1973 U.S. Geological Survey study. A 100-year flood can be expected to occur only once every 100 years, based on past experience. The map shows all of the waterfront as being in a flood-prone area. Flooding could be prevented by filling to acceptable elevations before construction, or by raising the level of perimeter dikes at the site.

Fire

The water transmission system serving the waterfront will need to be improved for fire protection purposes, as well as for water consumption. This would entail extending a second water main out to the Marina to connect with the existing main, creating a looped system. New hydrants will also be needed.

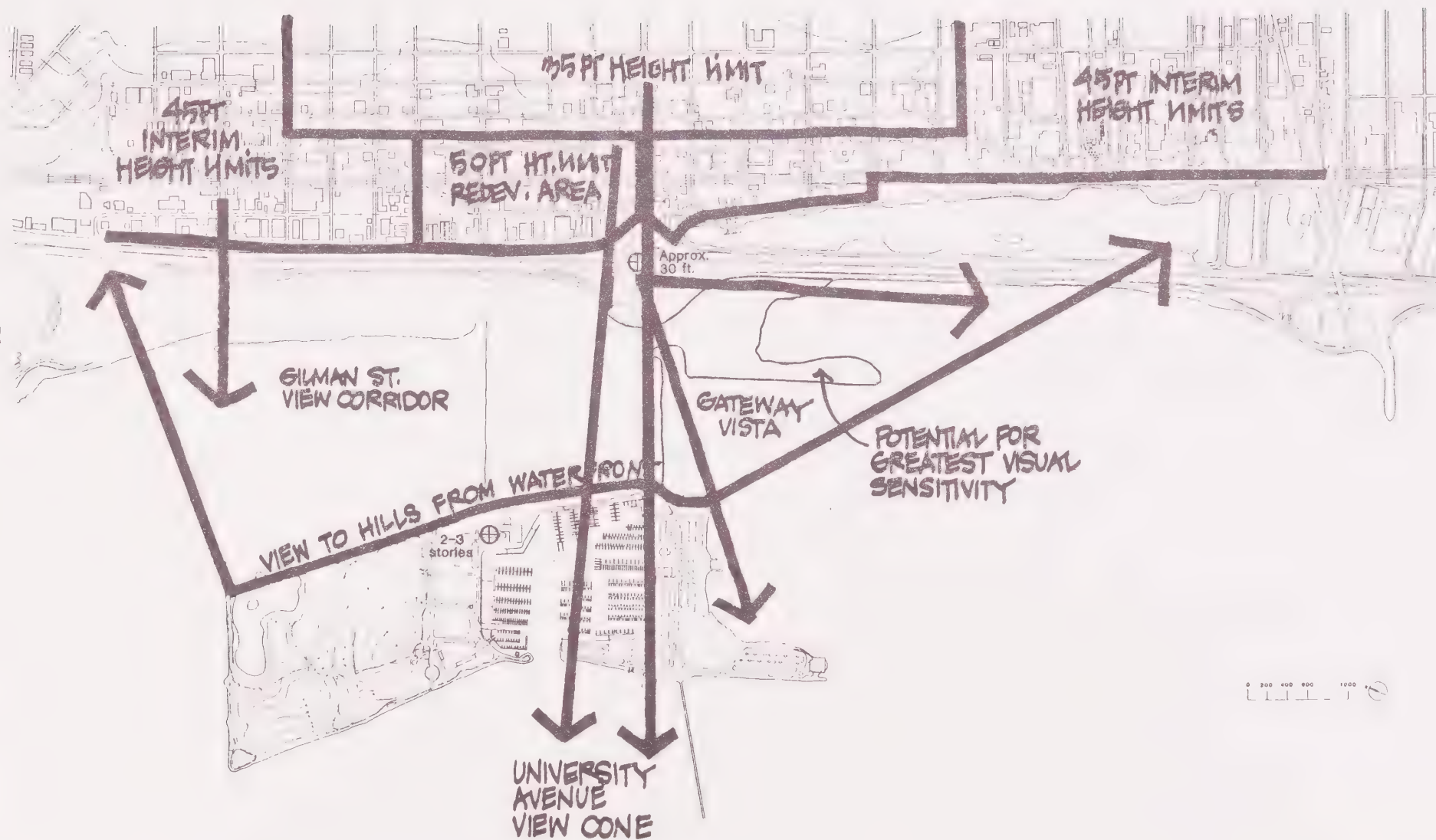
With the amount of development called for in the Waterfront Plan, it is not anticipated that an additional fire station will be needed at the site.

Figure 14

100 YEAR FLOOD PRONE AREAS

SOURCE: U.S. Geological Survey, 1973





Visual Landscape Context

Figure 15

4.6.2 Policies for Safety: See Section 2.6

4.7 Community Design

4.7.1 Conditions, Opportunities and Constraints

The Berkeley Waterfront is highly visible from many parts of the Bay Area, as well as from many points in Berkeley, because of its location directly east of the Golden Gate. The Waterfront itself affords important views across the Bay. The design of new development on the Waterfront should protect and enhance these visual resources, in addition to creating an attractive environment on the site.

The waterfront is an important cultural, natural, and educational resource for the City. Development there should reflect the creativity, diversity and uniqueness of the rest of the City, as well as the physical characteristics of the Waterfront.

Another factor in determining design standards for the Waterfront is compatibility with the heights of development in nearby areas. As shown in Figure 15, there are 35, 45, and 50-foot height limits in the parts of Berkeley immediately east of the freeway, and the height of the University Avenue overpass is approximately 50 feet.

Site Features and Views from the Site

The "Y" shape of the land extending from the linear portion of the Waterfront creates extensive frontage along the Bay, permitting many views across open water to the natural land forms of Angel Island and Mount Tamalpais, as well as significant constructed features such as the Golden Gate Bridge and the San Francisco skyline. Interstate 80 and the industrial zone to the east of the freeway are the major impediments to visual access to the rest of Berkeley.

The visual character of the site is expansive due to the flatness of the topography, the existence of few vertical elements, such as trees or buildings, and the proximity of water, which almost surrounds the site. Because the topography is flat, relatively minor differences in elevation can create dramatic viewpoints. North Waterfront Park, in particular, affords a panoramic view from the hilltop (approximately 70-foot elevation). The Meadow is not high enough to provide any significant view points except along the water's edges. The mounds of rubble at the Brickyard site are high enough to provide panoramic views of open water, although this is somewhat marred by foreground debris and scrub vegetation.

Figure 16 indicates the viewpoints for important views to and from the Berkeley Waterfront. View corridors are among the planning and environmental constraints which have determined the amount and location of development. (See Figure 8, Constraints Map.)

View Corridors from Berkeley.

Direct views from the Berkeley to the waterfront and the Bay are available along the view corridors of University Avenue, Gilman Street, and

Cedar Street. The University Avenue corridor is considered the most significant due to the volume of traffic and the sense of entry into the waterfront site that it provides (Figure 17, View 1). At the lower elevations of the City, most views of the Waterfront (including the corridor along University Avenue and Cedar Street) are blocked by the height of the freeway structure. At Gilman Street, the view opens up under the overpass (Figure 17, View 2). The view of the Bay from Cedar Street and Sixth Street is shown in Figure 17, View 3).

Views from the Freeway and Frontage Road

The site is visible from Interstate 80, but views from northbound I-80 to the water are somewhat obscured by freeway divider fences along the West Frontage Road and by landscaping further north. Views of the site are perpendicular to the direction of travel on the freeway, and the duration of views to the site tends to be short. From the elevated overpasses at Gilman Street and University Avenue, the Bay and Waterfront areas are clearly visible, with panoramic views to Mt. Tamalpais and the Richmond shoreline in the background.

Views from entrances to site are located at Gilman Street, Ashby Avenue, and University Avenue. The view from University Avenue is the most centrally located and offers the most panoramic views (Figure 17, View 1). The Golden Gate is visible from south of University Avenue. North of University Avenue, the cypress trees and boat masts at the Marina block views of the Golden Gate.

Views to the site from West Frontage Road are totally unobscured except for existing trees north of the University Avenue intersection. Dramatic views of the Bay, the San Francisco skyline, and the Golden Gate and Bay bridges can be seen from West Frontage Road south of University Avenue, where drivers or pedestrians are literally on the edge of the water (Figure 18, View 4). From West Frontage Road north of University Avenue, unobstructed views are available across the Meadow to the Bay Bridge, Yerba Buena Island, and Mt. Tamalpais (Figure 18, View 5).

Views from the Berkeley Hills

From the hills to the East, the Waterfront is seen in the setting of the surrounding Bay. Views that include the Golden Gate and the San Francisco skyline, Mt. Tamalpais and the Sausalito shore put the Waterfront site in a different perspective from views from the Berkeley flatlands or the freeway, and reduce the importance of the site as a major visual element in the overall scene.

Views from the Site

Figure 19 depicts a summary of views that are available from the site. From the Bay frontage of the site, views open up across the water to the San Francisco skyline; to Mt. Tamalpais and the Marin headlands; to the Golden Gate, Bay, and Richmond Bridges; and to Alcatraz and Angel Islands. These views are specially distinct along West Frontage Road south of University Avenue and the Brickyard where there is virtually no separation between the viewer and the water (Figure 18, View 4).

Distant views from the site are blocked in some places by the topography of the Marina and North Waterfront Park and existing trees. From the Meadow near University Avenue, distant views can be seen of the Emeryville and downtown Oakland skylines, but views of the Golden Gate are partially blocked by the masts of boats in the Marina and by the cypress trees planted along lower University Avenue and near the Marriott Hotel. Richmond, Albany, and the El Cerrito hills can be seen above the Meadow looking north. The landscape viewed from the North Basin Strip and Stables area is enclosed by the hills of North Waterfront Park, Fleming Point and the landfill peninsula in Albany. Mt. Tamalpais, the Marin hills, and the Richmond shoreline can be seen in the distance to the north and west (Figure 20, View 6).

Berkeley and the hills are seen beyond the site from North Waterfront Park, portions of the Marina and from eastbound University Avenue. The freeway overpasses and industrial buildings adjacent to the freeway block views of the lower parts of the hills from certain viewpoints on the waterfront site (Figure 20, View 7).

Figures 21 and 22 illustrate maximum view impacts from the Central Meadow and Meadow shore viewpoints. The actual visual impacts will depend on building heights, locations, clustering, setbacks, and roof design details.





1. Entering the site at University Avenue/Frontage Road intersection, looking west toward the Marina.



2. Looking under the I-80 overpass from 2nd and Gilman.



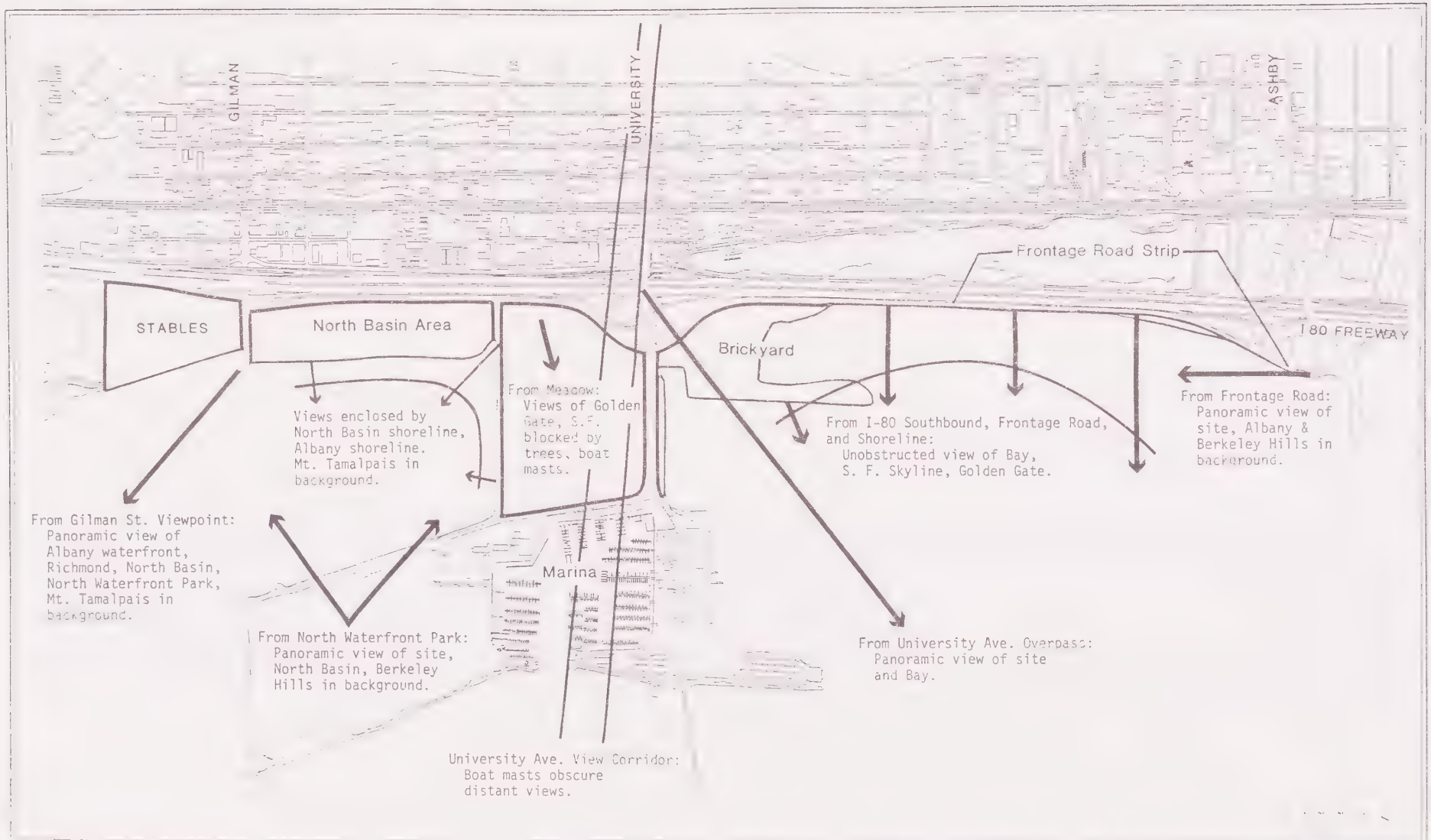
3. Cedar Street view corridor from 6th Street.



4. Panoramic view from West Frontage Road, south of University Avenue.



5. View from West Frontage Road, north of University Avenue, looking west across Meadow toward Marina.



LOCATIONS OF
VIEWS FROM THE SITE

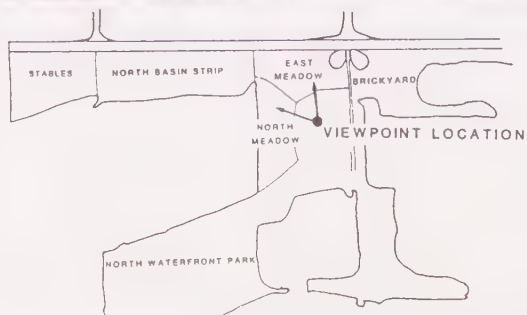
FIGURE 19



6. Panoramic view of North Basin area from shoreline at Gilman Street.



7. View from east shoreline of North Waterfront Park looking east across site toward Berkeley hills.

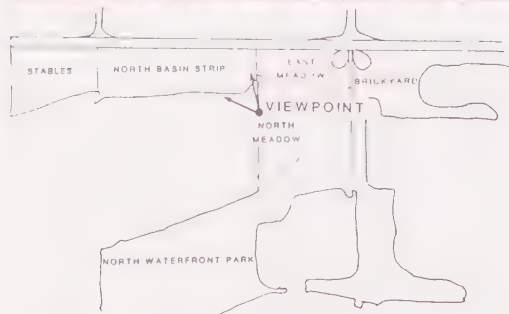
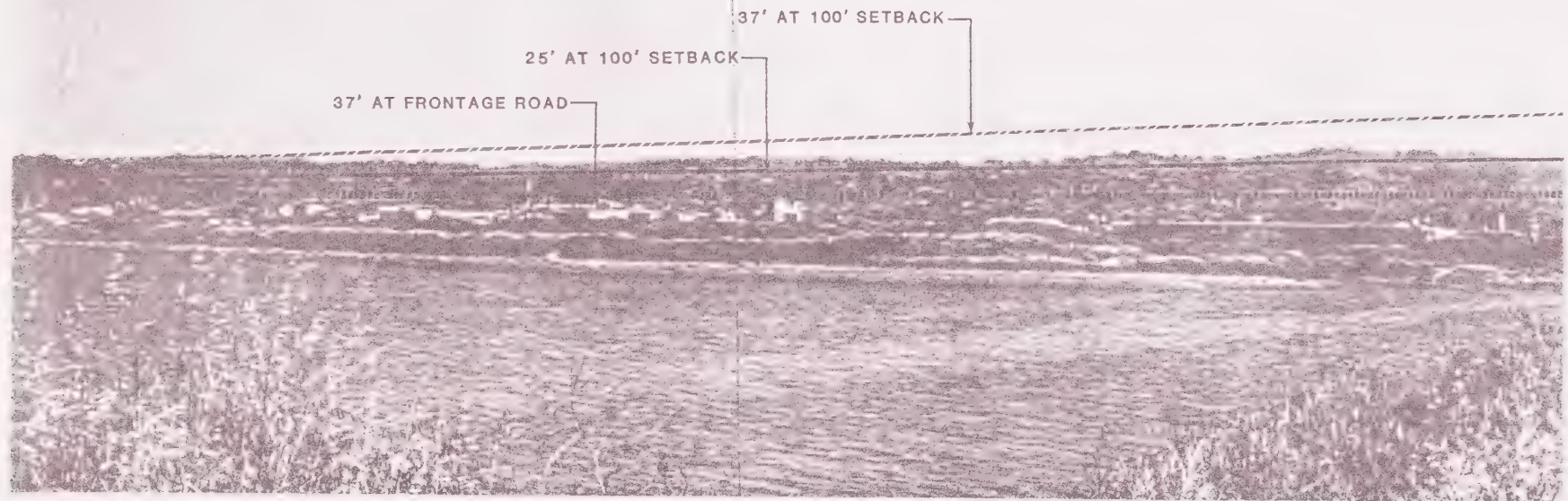


NOTE: Tape line only illustrates heights of buildings as proposed. It does not account for design details such as varied roof lines, setbacks, and view corridors. Views will vary with viewpoint locations.

VIEW FROM CENTRAL MEADOW : BERKELEY WATERFRONT PLAN

FIGURE 21

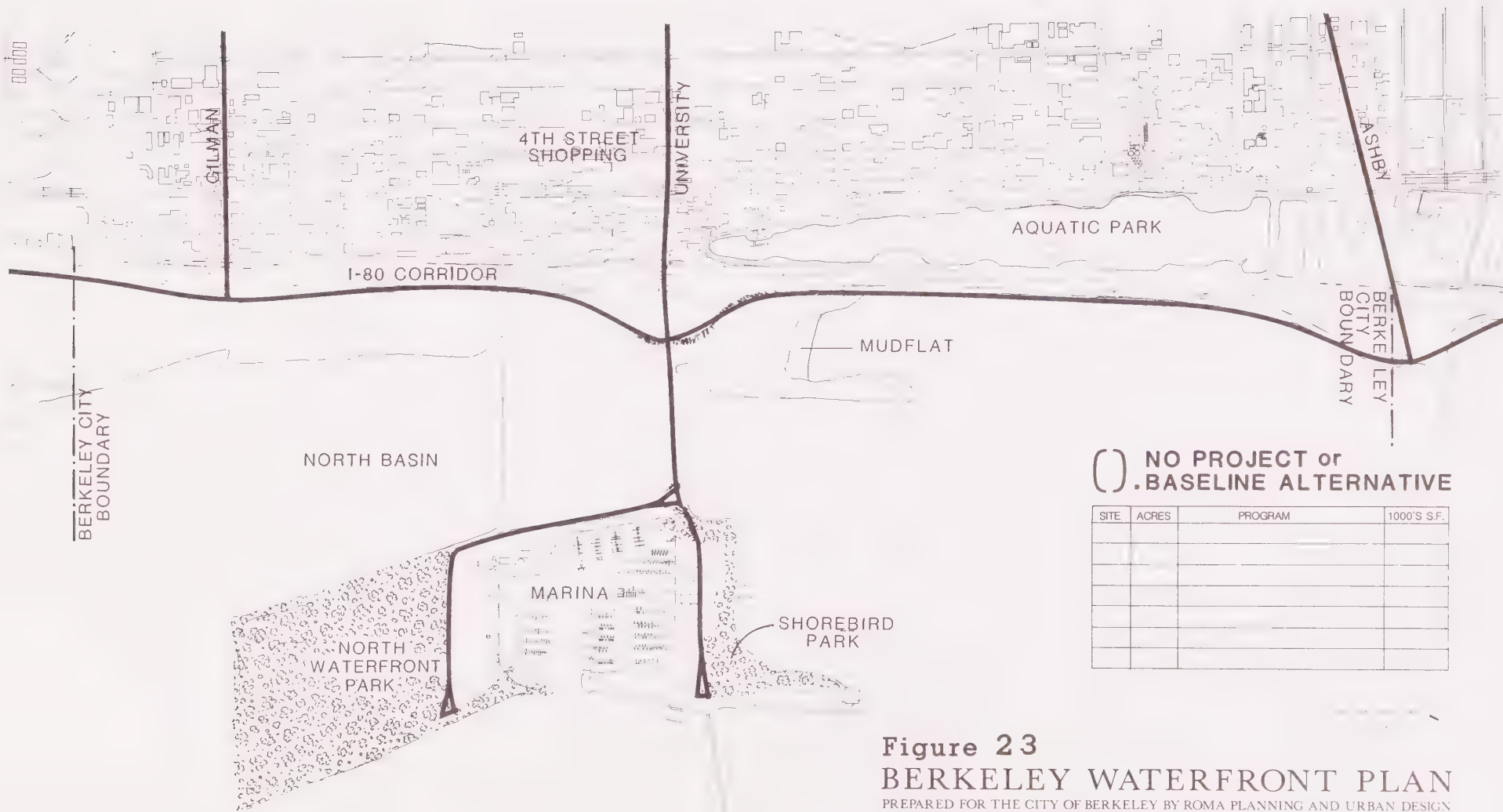
lsa



NOTE: Tape line only illustrates heights of buildings as proposed. It does not account for design details such as varied roof lines, setbacks, and view corridors. Views will vary with viewpoint locations.

VIEW FROM MEADOW SHORE: BERKELEY WATERFRONT PLAN

FIGURE 22



() NO PROJECT or
BASELINE ALTERNATIVE

SITE	ACRES	PROGRAM	1000'S S.F.

Figure 23
BERKELEY WATERFRONT PLAN

PREPARED FOR THE CITY OF BERKELEY BY ROMA PLANNING AND URBAN DESIGN
Anthony/Fleming Associates, Community Involvement • ESA, Environmental Assessment • DKS Associates, Transportation
McGuire and Company, Market and Financial Analysis • PAD, Social Analysis • Wilson-Porter, Civil Engineering

APPENDIX 1

HISTORY OF THE BERKELEY WATERFRONT

Ownership

The Berkeley Waterfront Area was the home of the Costanoan Indians, the native people of this region. The Indians inhabited the area until Spanish explorers and missionaries began to arrive. The last of these native people were generally removed or forced out of the area during the 1700's by the Spanish.

When California was still a part of Mexico, under the sovereignty of Spain, Don Luis Peralta, in 1818, applied to the Spanish Governor for 48,000 acres of land, extending north from San Leandro Creek to a hill called El Cerrito. Peralta divided this land among his four grown sons, Antonio, Domingo, Ignacio and Vicente. The present Berkeley shoreline was within the area known as Rancho San Antonio. The last heir and owner was Jose Domingo Peralta who, in 1841, built an adobe house alongside Codornices Creek. With the Treaty of Guadalupe Hidalgo, California acquired title to the waters of the Bay. Following the 1849 Gold Rush, "squatters" settled and were given title to homestead under the Possessory Rights Law of 1852. The Spanish Grantees and their families were dispossessed. In 1868, a Board of Tideland Commissioners was established and for the next several years much of the Bay's tidelands were sold to private individuals or corporations. The Pacific Guano Co. was in business during the 1920's on a portion of what is now known as the Meadow. From 1925 - 1935, the numerous small parcels of shoreline properties from Emeryville to Richmond were acquired by the Berkeley Waterfront Co., which, in turn, was absorbed by the Santa Fe Railroad Company. This left only two private owners of the Berkeley Waterfront, Santa Fe and George Murphy, a developer, based in Honolulu. His Meadow acreage was acquired by Santa Fe in the early 1980's.

The City of Berkeley was awarded a Tideland Grant by the State in 1913. This Grant was amended in 1961 to permit a variety of uses. This Tideland Grant area, largely filled during the 50's and 60's, comprises the present Yacht Harbor and Marina Development Project area.

Uses

The first use of the Berkeley Waterfront was for commerce. Ships carried goods to and from Berkeley, San Francisco and Sacramento and provided passenger service among cities and towns on the Bay. Before the City was incorporated in 1878 there was a town called Ocean View which grew on the shore of the Bay. Ocean View dated from 1853 when a wharf was constructed near what is now Delaware Street. The same year Bowen's Inn was established as a stage coach stop on San Pablo and Delaware Street. To the north of the wharf stretched a beach, and behind the beach was a salt marsh into which emptied Virginia and Codornices Creeks. The marsh let out to the north of what is now Golden Gate Fields. South of the Wharf was Strawberry Creek, a major creek which had a salmon run. Bordering the Creek was a major Indian shell mound which was excavated by the University of California in the 1930's. South of the shell mound the shore was dominated by bluffs of height varying from 10 to 20 feet down to the current border with Emeryville. At least two springs and finally Potter Creek entered the Bay in this stretch.

Ocean View was populated by people of many different nationalities: French, Germans, Italians, Portuguese, Chileans and others. The wharf, the San Pablo Road and later the train fueled the economy of the area. The beach, and Willow Grove Park, north of Strawberry Creek at 3rd Street, provided recreational areas. This history has been studied and forms the basis for the City's first historic district, the Delaware Street Historic District between 5th and 6th Streets.

The Heywood family owned much of the beach, and sand was sold for construction purposes. The beach finally disappeared under the freeway. The marsh became a dump site, finally being filled by debris from the Berkeley Fire of 1923. The Bay became polluted by an excess of untreated sewage and much of the natural wildlife died out. It is only in recent times that the Bay has become clean enough for sensitive life forms to begin to make a comeback.

Urban development of the East Bay accelerated after the 1906 earthquake. Between 1900 and 1910 Berkeley's population increased from 13,214 to 40,434. Following this rapid growth, plans for transportation facilities to increase Berkeley's regional importance were presented, including proposals for a deep water port, which were expanded to include an international airport in the 1940's.

These plans were not carried out. However, major projects which gave the Berkeley waterfront its present configuration were:

--The establishment of the Berkeley Yacht Club in the 1920's. In the 1960's the Yacht harbor was expanded and the Marina area was landscaped with a loan from the State Small Craft and Harbor Department. A requirement of the loan repayment was the establishment of restaurants and a hotel (His Lordship's, Solomon Grundy's - now Skates - and the Marriott).

--The construction of a 2 1/2 mile long pier to provide auto and passenger ferry service to San Francisco in the late 1920's. While only used for this purpose for seven years until construction of the Bay Bridge, the first mile is still used as a fishing pier.

--The Eastshore Highway (now the I-80 freeway) was constructed as a public works project in the 1930's. It was built on fill and now separates Aquatic Park, the east shore of which was the natural Bay shoreline at the time, from the rest of the Bay.

Post World War II growth and expansion helped accelerate Berkeley's Bay filling. Berkeley's garbage dump was one of over 40 such disposal sites around the Bay that burned municipal trash and garbage until the advent of the Regional Air Quality Control Board and the EPA regulations. Waste disposal on Berkeley's waterfront is being phased out.

Planning-Goals, Policies, and Legislative Constraints

City of Berkeley's Planning.

In 1951, the Berkeley Waterfront was rezoned from "Industrial" to "Unclassified." In 1955 a Master Plan Waterfront Amendment Plan proposed filling over 2,000 acres of open water for multiple urban uses. This was followed by technical and economic studies and public discussion. In 1961, the Planning Commission submitted a revised amendment, again proposing extensive fill for primarily non-water related uses. This plan led to the formation of the Save San Francisco Bay Association. Because of the strong public concern, and considerable opposition, the City Council requested that alternative plans be prepared.

In late 1963, the Council, showing a definite change of attitude, adopted new policies that reflected a fundamental change in their previous assumptions. The Council directed: that the Waterfront fill should not extend any farther to the south and west, and should not extend beyond Gilman Street to the north, that park and recreational uses should be emphasized and that planning should be considered more fully in the regional context. At this period the City's vision was for a "Berkeley Regional Shoreline Recreation Area." At this time also, Aquatic Park was saved from being filled and developed as an industrial park or as a golf course. To assist with planning decisions the Council appointed an Advisory Committee on Waterfront Planning.

These Council policies were reaffirmed at the Council meeting of October 20, 1964, and expressed in the Interim General Waterfront Plan. Included in the waterfront Objectives were #1: "Insofar as possible the development of Berkeley's waterfront should be designed to fit harmoniously into a coordinated development plan for offshore lands throughout the Bay Area, particularly between the Bay Bridge and Point Richmond"; and #5: "Berkeley's portion of the shoreline of San Francisco Bay should be reserved exclusively for public recreation and its related public uses. To achieve this the City should gain sufficient control of the shoreline and tidelands to assure permanent public use of the Bay along Berkeley's entire eventual shoreline with provision for access at multiple points." This Interim Waterfront Plan was updated by the 1977 Master Plan.

In March 1965, a five-page City Manager's report to the Council on the feasible methods of acquisition of the privately held lands presented a comprehensive list of sources of funds. For the past 20 years, this issue (source of acquisition funds) has been a recurring concern. The City's current planning process for the Waterfront Plan (see Appendix #2) has addressed the question of what kind of development use would be appropriate for the site, regardless of the possibility of public acquisition. The Waterfront Plan has also taken into consideration types of recreational activities recommended by State Parks and others. It has also recommended areas for public acquisition, based on the City's objectives for open space and recreational use.

Planning Constraints - Bay Conservation and Development Commission.

In the early 60's when "Save the Bay" was involved in opposing Berkeley's grandiose plan for a second Berkeley in-the-Bay, this organization also became concerned regarding the Bay-wide issue of indiscriminate filling of the Bay. With the leadership of the late Senator McAttee and then Assemblyman Nick Petris, a Bay Study Commission was established in 1965. It recommended the establishment of a State Regulatory Commission which was enacted in 1967. Finally, with the help of a State and National public awareness campaign undertaken by a coalition of conservation organizations, the Save the Bay legislation, known as the McAttee-Petris, act was passed and a permanent Bay Conservation and Development Commission was established. This means that any further filling of the Bay must be in accordance with BCD's criteria and in accordance with their San Francisco Bay Plan.

Santa Fe's Plans. For almost 40 years, Santa Fe has had plans for the development of their Eastshore property. In 1954, a proposal was made which highlighted the development of industrial areas on the waterfront, to be served by their nearby railroad.

In 1963, Victor Gruen and Associates presented a regional plan for the offshore areas of Emeryville, Berkeley, and Albany which involved massive Bay fill. By this time, since both citizens and officials were now considering the Bay as an aesthetic asset rather as real estate, the plan met with very little enthusiasm.

In 1970, William Pereira designed a regional shopping center for the Meadow, with Ernest Hahn the developer. At the many public hearings there was strong opposition from organizations (Urban Care, Save The Bay, Berkeley Bay Front Council, and numerous others) as well as from many concerned citizens. The Council voted against granting a use permit and soon afterward Santa Fe and George Murphy, the property owners, sued the City for 12 million dollars each. Although the basis for the lawsuit was inverse condemnation, the State entered the case and extended it geographically to the City's northern and southern boundaries and legally expanded it to include the issue of the public trust. "Save the Bay" and Sierra Club entered the case as Friends of the Court. In 1980, the State Supreme Court declared that "submerged lands as well as lands subject to tidal action...are subject to the trust." The "public trust" is the right of the people to use the lands covered by water for fishing, navigation, and water related commerce and recreation.

Planning of State Agencies

Coastal Conservancy.

The State Coastal Conservancy was created by the legislature in 1976 to restore, preserve and enhance the coastal resources and to solve difficult land use problems. In 1980, the Conservancy worked with a group of public agencies and private citizens to identify potential projects for public acquisition and development along the Eastshore waterfront. Some projects, including a new boat dock for the Berkeley South Sailing Basin, have been completed. In 1981, the Conservancy conducted community workshops in Berkeley which led to a recommendation for a combination of development and public acquisition for the Berkeley Waterfront.

State Department of Parks and Recreation. For the 1980 Park Bond Act, this East Bay Shoreline had been the number one site selection for an urban park of all Alameda County's park and recreation officials.

In December, 1982, the Department of Parks and Recreation presented to the public their East Bay Shoreline Feasibility Study, describing how a State recreation area could be established along the shoreline from Emeryville through Albany. The State already had provided funds for improving North Waterfront Park. Sites in Berkeley include the North Waterfront Park and much of the same areas covered by the City's present plan.

State Department of Transportation (CalTrans). In the past few years, Caltrans presented several plans to improve I-80 from the Bay Bridge to the Carquinez Bridge to various groups involved in waterfront planning. In Berkeley, improvements are proposed for the three interchanges at Ashby, University and Gilman Streets. The City is working with CalTrans to assure that any improvements conform with local objectives, and has devoted extensive efforts to relating the design of the University Avenue interchange to the Waterfront Plan.

Citizen Organizations' Planning. Numerous citizens' organizations have been closely involved in all the waterfront planning processes since the early 60's and more recently since 1980. They include: the Golden Gate Audubon Society, Berkeley Design Advocates, Berkeley Beach Committee, Cal Sailing Club, DAWN, "Save the Bay", League of Women Voters, Urban Care, Berkeley Bayfront Council, Berkeley Bayfront Conservancy Fund, Friends of Aquatic Park, Regional Parks Association, the Sierra Club, and Environmental Defense Fund.

Several groups created their own plans for the waterfront. Most well known among these has been the Sierra Club Plan. The Revised Sierra Club Plan advocates an open Meadow and Brickyard and a maximum of 300,000 square feet of development to be located on the North Basin Strip.

A number of the above mentioned organizations have joined with Citizens for the Eastshore State Park, a coalition of groups and individuals whose purpose is to further the creation of a significant urban recreation area along the Eastern shore of San Francisco Bay.

APPENDIX 2

THE CITY'S PLANNING PROCESS

The City's present planning efforts for the Waterfront began in 1983, following the announcement in 1982 by the Santa Fe of their intent to develop more than 4 million square feet of commercial space on the Waterfront. The City's 1977 Master Plan contained only very general policies for the Waterfront, and did not constitute an adequate basis for evaluating the proposal. The City's Unclassified zoning district for the Waterfront did not specify land uses or other standards, but allowed any type of development consistent with the Master Plan, subject to approval of a Use Permit.

As a first step, in the spring and summer of 1983, the City conducted a series of workshops which led to the preparation of preliminary goals and policies for the Waterfront.

In January 1984, the City initiated a planning process which would produce a Master Plan amendment and a Specific Plan for the Waterfront, the process that resulted in this document. First, the City requested individuals and organizations to submit proposals for the Waterfront. A total of 29 responses resulted, ranging in intensity from recreation and open space uses to construction of floating islands to add to on-shore development.

The City contracted with the ROMA Design Group as the prime consultant for the Waterfront Plan in summer 1984. ROMA and their sub-contractors did the information collection, analysis, planning, and report preparation work and drafted a set of development prototypes. The City selected five alternatives to evaluate as the first major step in the planning process, derived from the proposals submitted by the community. (See Figures 23 through 27, Tables 11 through 15). These alternatives were:

No Project, required by State law for environmental review purposes. Assumes no development or improvements.

1. Low Intensity, 100,000 to 200,000 square feet of development.
2. Low/Moderate Intensity, 500,000 to 565,000 square feet of development, similar to the proposal submitted by the Sierra Club.
3. Moderate Intensity, 2.3 million to 2.8 million square feet of development.

4. High Intensity, 4.2 million square feet of development, the Santa Fe proposal.

The consultants compiled and analyzed extensive information on the environmental, economic, traffic, and visual characteristics of the Waterfront. (See Summary of Opportunities and Constraints, Background Analyses, Jan. 28, 1985). This information was presented at a series of community workshops during February and March 1985, on Economic Development and Employment, Housing, Conservation/Recreation and Open Space, Urban Design, and Transportation and Community Facilities. Workshop participants raised their questions about the Waterfront in each of these subject matters areas. These questions led to the development of criteria for comparing the alternatives.

The City Council approved the evaluation criteria in April 1985, and these were used as a basis for the Evaluation of Alternatives report produced in May. Among the major findings of that report were:

Economic Development. Alternative 4, which includes more development and generates more jobs than the other three, ranked most effective in this category.

Housing. Alternative 3, the only one which includes housing, ranked somewhat higher than the others in this category. However, the rankings were relatively close, since all the alternatives could be expected to increase housing prices elsewhere in Berkeley unless there are programs to prevent this from happening.

Conservation. In the category of environmental protection and minimizing natural hazards, the alternatives ranked in reverse order of the amount of development included, with alternative 1 ranking most effective.

Recreation and Open Space. Both Alternatives 1 and 3 rated higher than the other two in this category -- Alternative 1 because of the great amount of open space provided, and Alternative 3 because of the wide variety of recreational and cultural activities included.

Land Use and Urban Design. Alternative 3 ranked higher than the other three in this category primarily because it included the widest range of land use and activities, and because it created physical links with the West Berkeley community east of the freeway.

Transportation. Alternatives 1, 2, and 3 ranked fairly close together in this category -- Alternatives 1 and 2 because of relatively low amounts of development and thus low levels of traffic congestion, and Alternative 3 because it would create incentives for transit use and because it included

housing, which is a lower peak-hour traffic generator than some other uses. Alternative 4 ranked substantially lower, because its higher level of development would cause heavier traffic impact, especially during the peak periods when office workers are going to, or leaving their jobs.

Utilities. The alternatives ranked in reverse order of the amount of development included, in their effects on need for utilities, public facilities and public services. However, the alternatives with greater amounts of development would be more capable of offsetting costs through revenues.

* * * * *

During the summer and fall of 1985, the consultants conducted several additional studies for the Waterfront Plan. Special attention was given to the economics of Waterfront development, to assure that the plan would allow for a reasonable economic return to the property owner. (See Revised Preliminary Conceptual Framework for Development of a Preferred Alternative, July 15, 1985; Economics of the Preferred Alternative for the Berkeley Waterfront Plan, October 1985, prepared by Economics Research Associates.) Woodward/Clyde Consultants conducted additional analysis of seismic hazards, and DKS Associates analyzed alternatives for improvements to the University Avenue interchange of the Interstate 80 freeway, to assure coordination with the land use policies of the Waterfront Plan.

The City Council in July 1985 gave directions to the consultants for preparation of the Preferred Alternative which would be the basis for the Master Plan amendment for the Waterfront. A major policy direction from the Council was, "The Berkeley Waterfront should become part of a continuous East Bay shoreline open space system. An appropriate amount of private development should take place, to make the Waterfront part of a vibrant urban community, attractive to and usable by people." The Council indicated that recreation and open space; a centerpiece visionary public use; small-scale recreational/commercial activities; a conference center, and lodging and accommodations were desired uses. The North Basin Strip was indicated as the top priority area for development. A total of 500,000 square feet of development was recommended as a working figure, to assure a reasonable economic return for the property owner, and to attain the benefits desired by the City.

The consultants presented a draft Preferred Alternative in September. (See Figure 28, Table 16.) It envisioned 705,000 square feet of commercial development, including one hotel and conference center in the East Meadow area and another in the Stables area, and a retail center at the Marina Edge. More than 80 percent of the site would be in open space and recreational uses; however, the Meadow was designated as private open space since the amount of development would not justify requiring its dedication for public purposes.

In the hearings and workshops on the draft Preferred Alternative, the public expressed concern about three main issues: the fact that some development was shown on the Meadow, the fact that the Meadow would be private open space and therefore public access could not be assured, and the total amount of development.

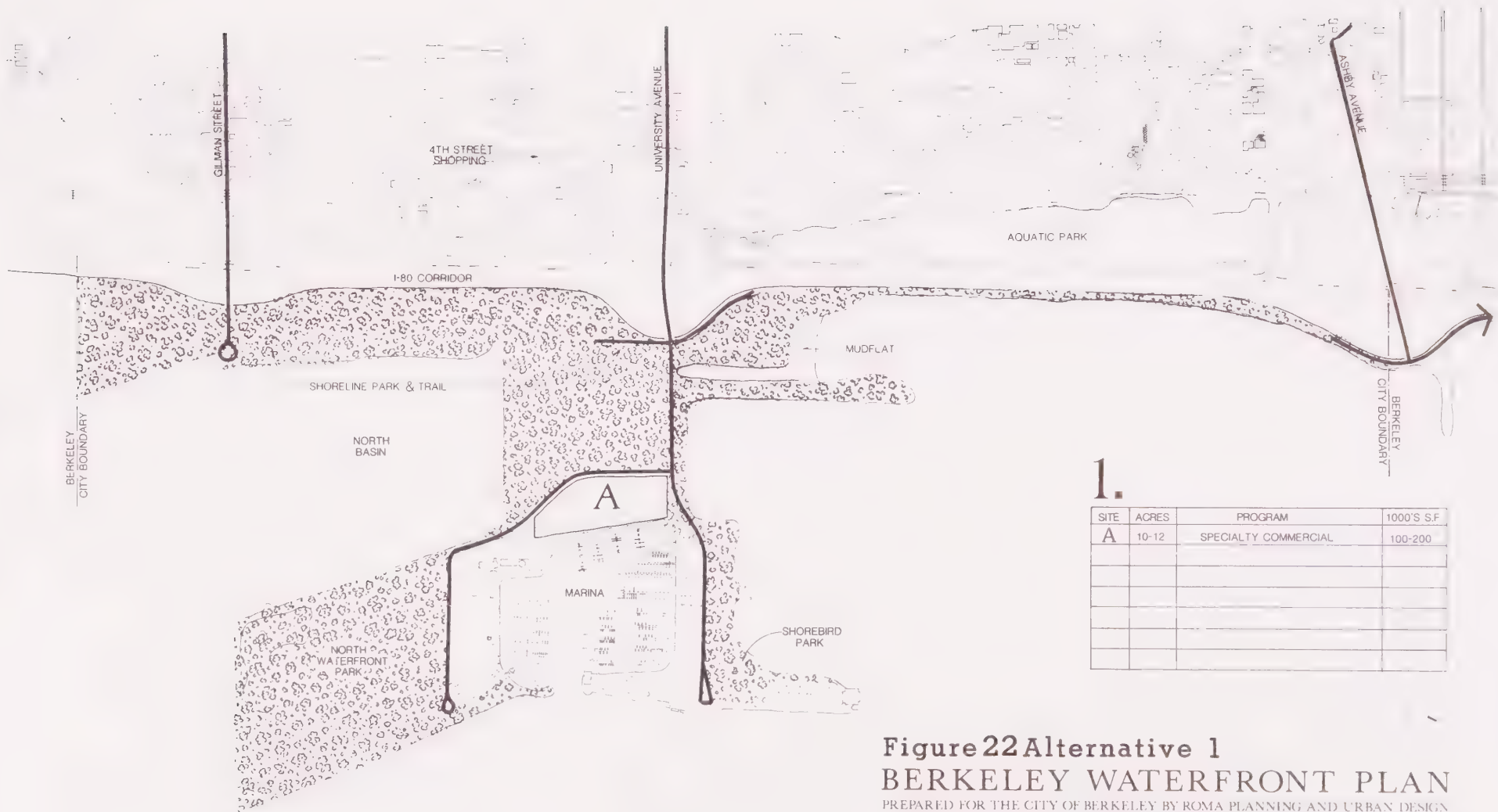
In January 1986, the consultants presented a revised Preferred Alternative with several important changes. (See Figure 29.) It provided for 575,000 square feet of commercial development, all alongside the freeway. The Phase I Hotel was moved north, on a location at the corner of

the North Basin Strip, which provided a closer relationship to the water and left the Meadow open. A small restaurant was shown on the Brickyard. A continuous 100 foot shoreline access band would be dedicated to a public agency.

A most important change was that all of the 50-acre Meadow was designated as "to be acquired for public purposes." This was based on the great importance of the open space value of the Meadow. It provides important views to and from the Waterfront. Its location is unique as a highly visible part of the Bay shoreline. There are indications of important wetlands habitat value on the Meadow, and there is substantial risk of damage from earthquakes. The Meadow is also the most desirable location for recreational activities.

The City Council on February 15, 1986, approved a revised Preferred Alternative with several additional changes: designating the Brickyard and part of the East Meadow area for public acquisition, and indicating other important policy directions including deletion of a possible visionary public use. The Council then directed staff to prepare an amendment to the City's Master Plan and a Specific Plan consistent with that document. Further evaluation of the Preferred Alternative based on findings of the Environmental Impact Report led to the recommendation that the Central Meadow and Brickyard be designated for open space with further evaluation of the feasibility of acquisition and determination of appropriate areas to be referred for dedication, rather than specifying public acquisition.

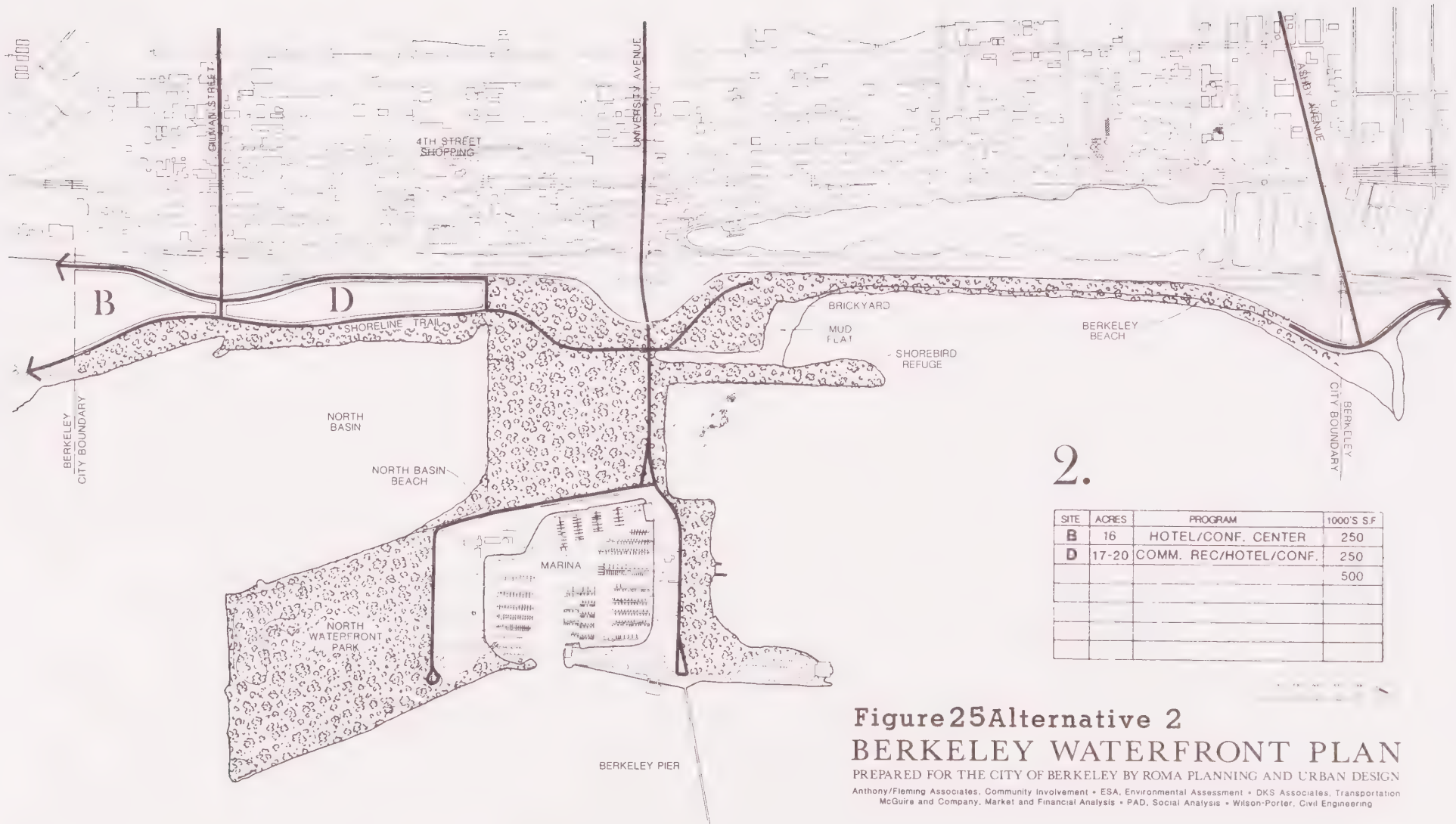
These documents have been prepared in accordance with requirements of the Planning and Zoning Law of the California Government Code, Title 7, Planning and Land Use, Chapter 3, Local Planning. The City's Master Plan constitutes a General Plan as defined by State Law. All elements and procedures required for General Plans and Specific Plans have been included. The Specific Plan it sets forth all necessary standards to enable the City to regulate development in the area. As required by the California Environmental Quality Act, an Environmental Impact Report has been prepared on the Master Plan amendment and Specific Plan.



1.

SITE	ACRES	PROGRAM	1000'S S.F.
A	10-12	SPECIALTY COMMERCIAL	100-200

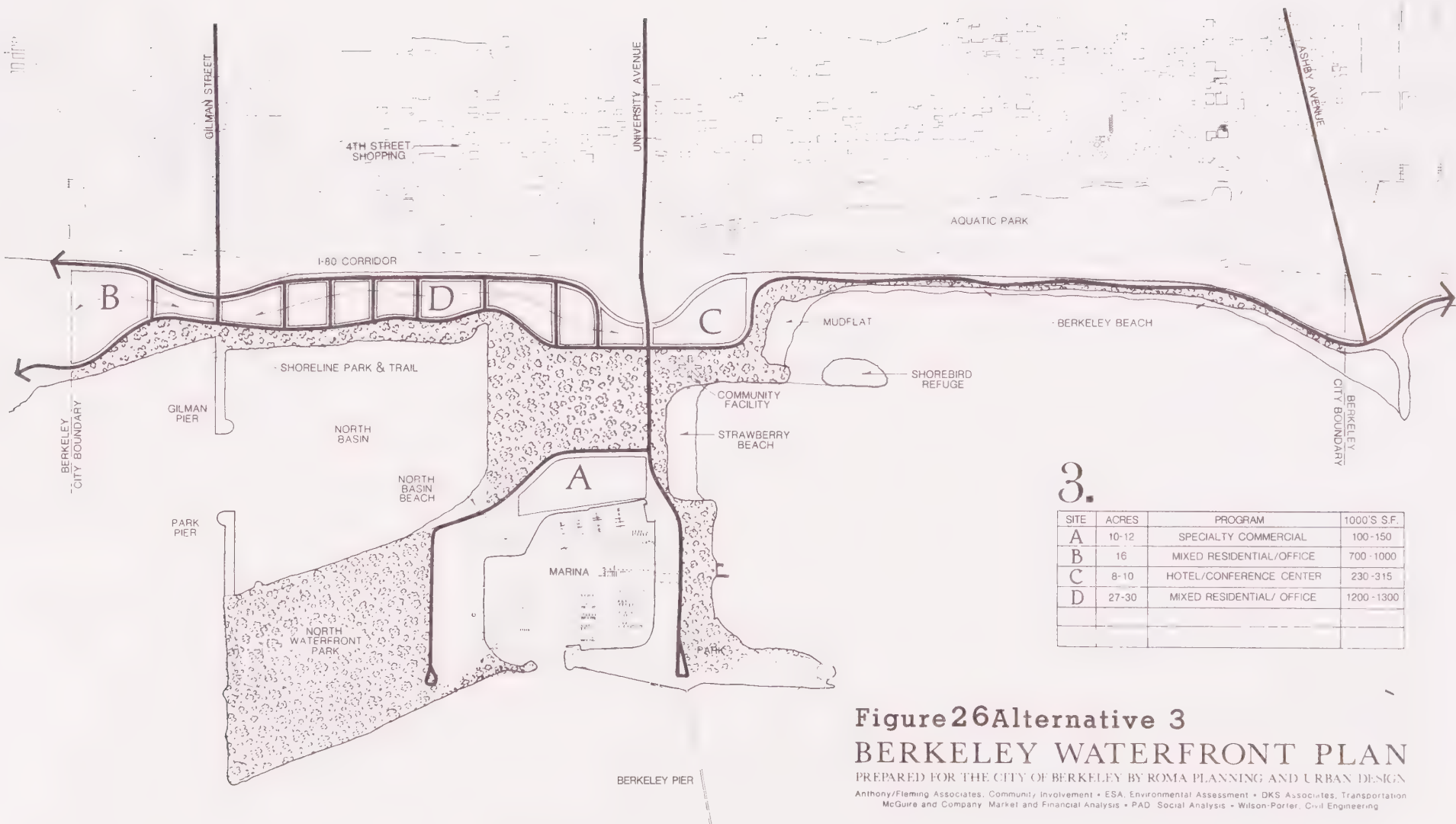
Figure 22 Alternative 1
BERKELEY WATERFRONT PLAN
 PREPARED FOR THE CITY OF BERKELEY BY ROMA PLANNING AND URBAN DESIGN
 Anthony/Fleming Associates, Community Involvement • ESA, Environmental Assessment • DKS Associates, Transportation
 McGuire and Company, Market and Financial Analysis • PAD, Social Analysis • Wilson-Porter, Civil Engineering



2.

SITE	ACRES	PROGRAM	1000'S S.F.
B	16	HOTEL/CONF. CENTER	250
D	17-20	COMM. REC/HOTEL/CONF.	250
			500

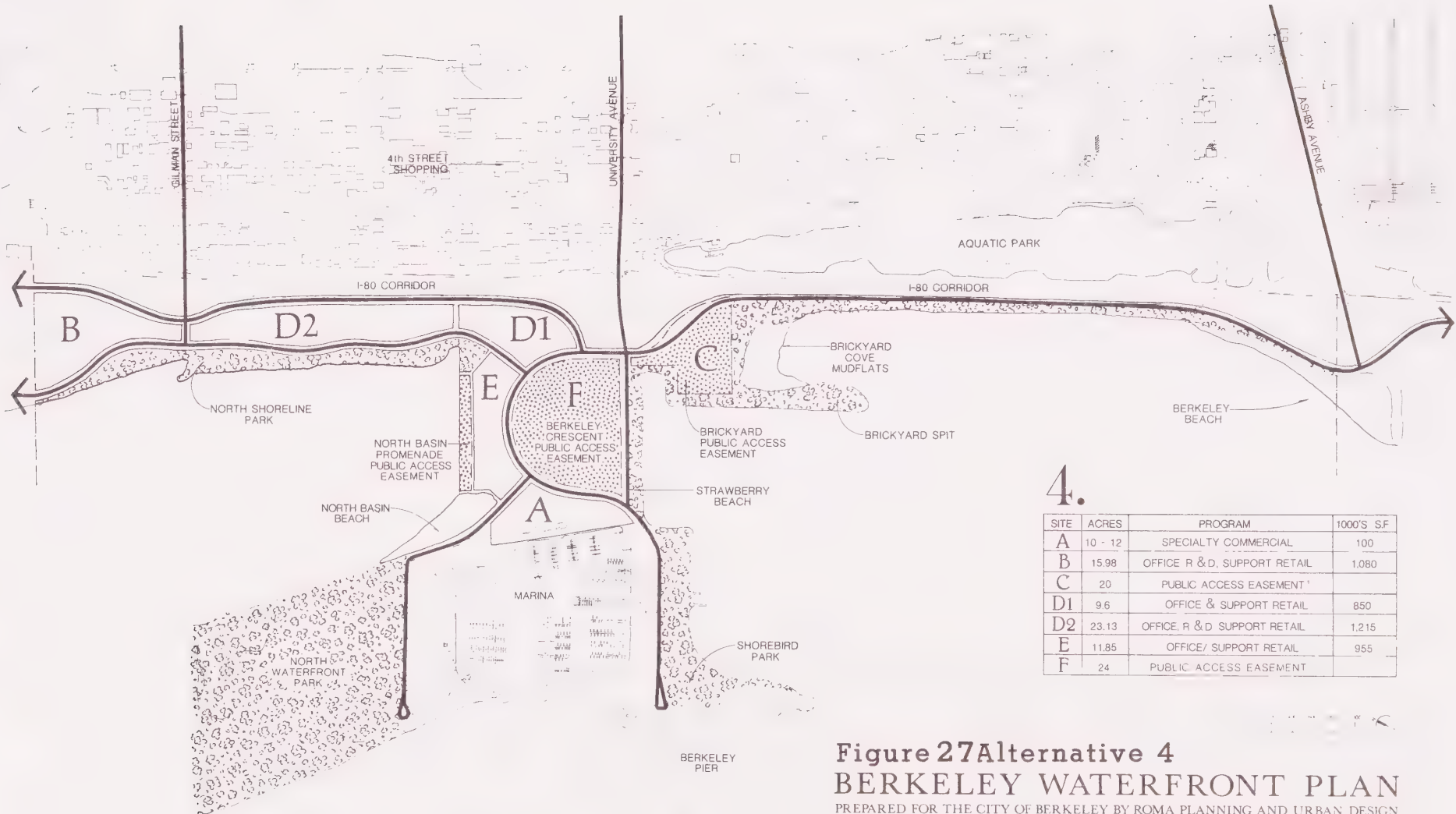
Figure 25 Alternative 2
BERKELEY WATERFRONT PLAN
 PREPARED FOR THE CITY OF BERKELEY BY ROMA PLANNING AND URBAN DESIGN
 Anthony/Fleming Associates, Community Involvement • ESA, Environmental Assessment • DKS Associates, Transportation
 McGuire and Company, Market and Financial Analysis • PAD, Social Analysis • Wilson-Porter, Civil Engineering



3.

SITE	ACRES	PROGRAM	1000'S S.F.
A	10-12	SPECIALTY COMMERCIAL	100-150
B	16	MIXED RESIDENTIAL/OFFICE	700-1000
C	8-10	HOTEL/CONFERENCE CENTER	230-315
D	27-30	MIXED RESIDENTIAL/ OFFICE	1200-1300

Figure 26 Alternative 3
BERKELEY WATERFRONT PLAN
PREPARED FOR THE CITY OF BERKELEY BY ROMA PLANNING AND URBAN DESIGN
Anthony/Fleming Associates, Community Involvement • ESA, Environmental Assessment • DKS Associates, Transportation
McGuire and Company, Market and Financial Analysis • PAD, Social Analysis • Wilson-Porter, Civil Engineering



4.

SITE	ACRES	PROGRAM	1000'S S.F.
A	10 - 12	SPECIALTY COMMERCIAL	100
B	15.98	OFFICE R & D, SUPPORT RETAIL	1,080
C	20	PUBLIC ACCESS EASEMENT ¹	
D1	9.6	OFFICE & SUPPORT RETAIL	850
D2	23.13	OFFICE, R & D, SUPPORT RETAIL	1,215
E	11.85	OFFICE/ SUPPORT RETAIL	955
F	24	PUBLIC ACCESS EASEMENT	

Figure 27 Alternative 4
BERKELEY WATERFRONT PLAN
PREPARED FOR THE CITY OF BERKELEY BY ROMA PLANNING AND URBAN DESIGN
Anthony/Fleming Associates, Community Involvement • ESA, Environmental Assessment • DKS Associates, Transportation
McGuire and Company, Market and Financial Analysis • PAD, Social Analysis • Wilson-Porter, Civil Engineering

PHASE 2:

HOTEL
350 ROOMS
230,000 S.F.
MAX. HT. 45'
350 CARS

PHASE 2:

SPORTS CENTER
ENCLOSED SPACE 40,000 S.F.
BALL FIELDS, COURT GAMES,
BOAT RENTALS, RESTAURANT,
LOCKERS, SHOWERS,
TOILETS, BLEACHERS,
INDOOR SPORTS
MAX. HT. 25'
350 CARS

PHASE 1:

HOTEL/CONF. CENTER
500 ROOMS
320,000 S.F.
CONF. CENTER
40,000 S.F.
TOTAL 360,000 S.F.
MAX. HT. 45'
500 CARS

PHASE 0:

BRICKYARD NATURE PRESERVE
PUBLIC USE FACILITY
10,000 S.F.
MAX. HT. 15'

PHASE 0:

BERKELEY BEACH/SHORELINE TRAIL

86

PHASE 1 & 2:
CONTINUOUS
SHORELINE
PUBLIC ACCESS

PHASE 1:
THE MEADOW
PASSIVE OPEN SPACE
SHAKESPEARE THEATRE
VISITOR PARKING 400 CARS

PHASE 0:
INTERNATIONAL CULTURAL CENTER
ENCLOSED SPACE
MULTI-USE AUDITORIUM 30,000 S.F.
MEETING ROOMS
EXHIBITION SPACE
MUSEUM
MAX. HT. 25'

PHASE 0:
SOUTH BASIN
OPEN WATER

PHASE 0:
NORTH BASIN
SHELTERED WATER
OPEN WATER

PHASE 1:
WATERFRONT CENTER
COMM. REC. 75,000 S.F.
RETAIL/RESTAURANT/MARINE ORIENTED OFFICE
MAX. HT. 15' ON SOUTH END, 25' ON NORTH END
PARKING 300 CARS

DRAFT PREFERRED ALTERNATIVE
September 1985

PHASE 0 INDEPENDENT
PHASE 1 BEGINS 1986
PHASE 2 BEGINS 1995

SEPTEMBER 12, 1985 DRAFT

Figure 28
BERKELEY WATERFRONT PLAN

PREPARED FOR THE CITY OF BERKELEY PREPARED BY ROMA PLANNING AND URBAN DESIGN

ROMA PLANNING AND URBAN DESIGN 1000 SHATTUCK BLVD. BERKELEY, CA 94704 TEL. (415) 841-1111 FAX. (415) 841-1112

HOTEL NO. 2
 20 ACRE SITE
 165,000 S.F. 250 ROOMS
 +10,000 S.F. FREE STANDING RESTAURANT
 175,000 TOTAL
 360 PARKING SPACES
 MAX. HEIGHT 45 FT.

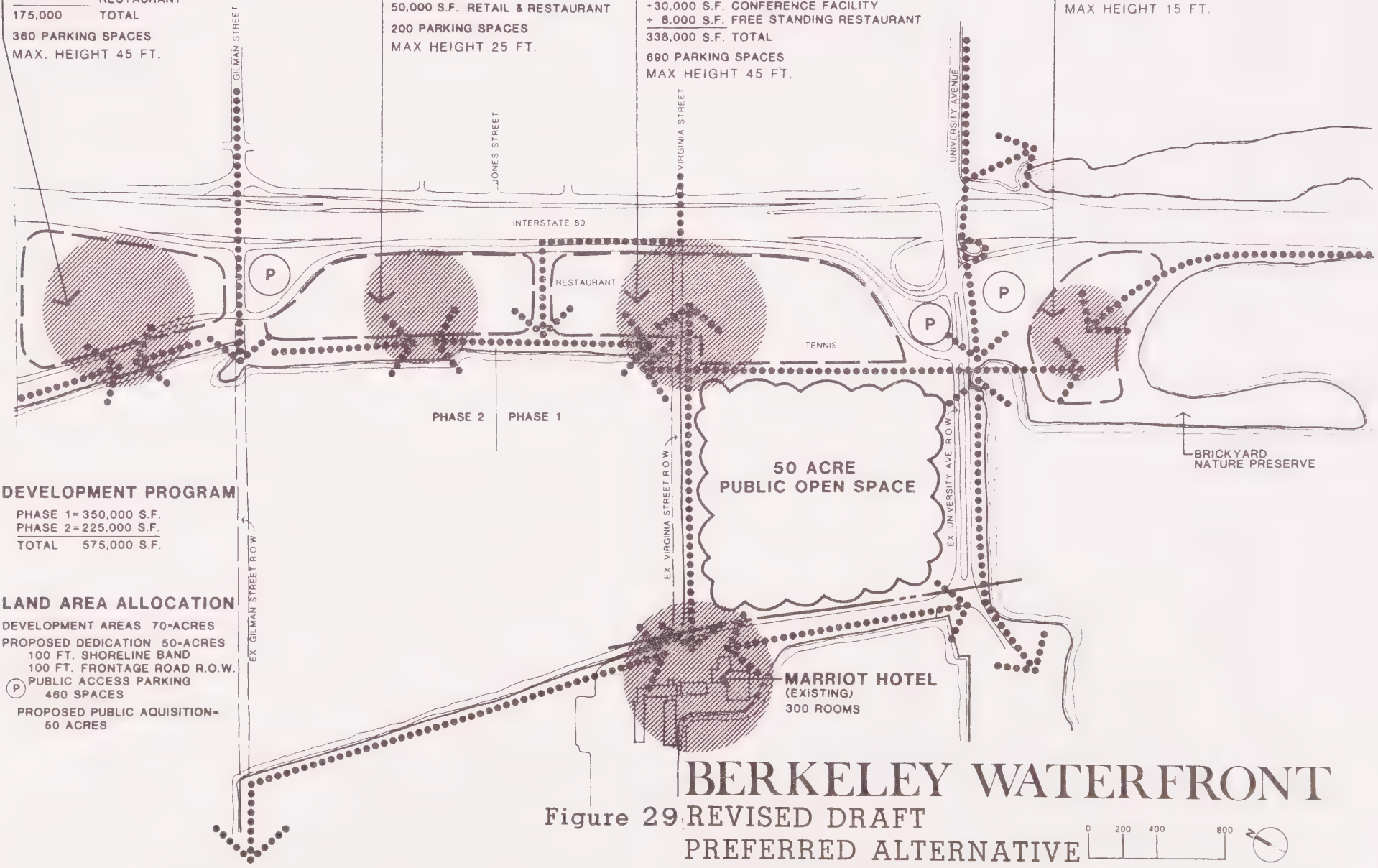
WATERFRONT SPECIALTY CENTER "BERKELEY FOOD FAIR"
 15 ACRE SITE
 50,000 S.F. RETAIL & RESTAURANT
 200 PARKING SPACES
 MAX HEIGHT 25 FT.

HOTEL NO. 1 & CONF. CENTER "LANDMARK QUALITY"
 30 ACRE SITE
 300,000 S.F. 450 ROOMS
 +30,000 S.F. CONFERENCE FACILITY
 + 8,000 S.F. FREE STANDING RESTAURANT
 338,000 S.F. TOTAL
 690 PARKING SPACES
 MAX HEIGHT 45 FT.

RESTAURANT
 11 ACRE SITE
 12,000 S.F.
 135 PARKING SPACES
 MAX HEIGHT 15 FT.

DEVELOPMENT PROGRAM
 PHASE 1= 350,000 S.F.
 PHASE 2= 225,000 S.F.
 TOTAL 575,000 S.F.

LAND AREA ALLOCATION
 DEVELOPMENT AREAS 70-ACRES
 PROPOSED DEDICATION 50-ACRES
 100 FT. SHORELINE BAND
 100 FT. FRONTAGE ROAD R.O.W.
 (P) PUBLIC ACCESS PARKING 460 SPACES
 PROPOSED PUBLIC ACQUISITION- 50 ACRES



BERKELEY WATERFRONT

Figure 29 REVISED DRAFT
 PREFERRED ALTERNATIVE
 January 1986



Table 11 SUMMARY OF ALTERNATIVE LAND USE ALLOCATIONS (ACRES)

<u>Alternative</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Open Space				
Basic Components	70	70	70	65
Additional (including circulation)	86	58	27	24
Development				
Privately-held	7	37	63	71
City-owned	5	0	5	5
Freeway Take (Approximate)	<u>5-10</u>	<u>5-10</u>	<u>5-10</u>	<u>5-10</u>
Total Upland Area	175	175	175	175
Mudflats/Marsh	5-10	5-10	5-10	5-10
Beach Areas	7-10	7-10	7-10	7-10
Open Water Areas	<u>+500</u>	<u>+500</u>	<u>+500</u>	<u>+500</u>
Total Wetlands and Submerged Lands	515	515	515	515
TOTAL	690	690	690	690

Table 12 SUMMARY OF ALTERNATIVE DEVELOPMENT PROGRAMS

<u>Alternative</u>	<u>1</u> (s.f.)	<u>2</u> (s.f.)	<u>3</u> (s.f.)	<u>4</u> (s.f.)
Commercial/ Recreation	<u>200,000</u>	<u>500,000</u>	<u>480-600,000</u>	<u>1,050,000</u>
Hotel		650 rooms	550 rooms	1,500 rooms
Retail	150,000	100,000	35-50,000	100,000
Conf. Facility	50,000	50,000	50-150,000	50,000
Office/R&D	None	None	<u>1,145,000</u>	<u>3,000,000</u>
Residential	None	None	<u>760,000</u> 950 units	None
TOTAL	200,000	500,000	2,300,000 to 2,420,000	4,150,000

Table 13 COMPARISON OF THE PHYSICAL CHARACTERISTICS OF DEVELOPMENT

<u>Alternative</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
<u>Open Space</u>				
Acres	156	128	97	89
Percent of Total Upland	93	78	59	54
<u>Development Parcels</u>				
Acres	7 + 5	37	63 + 5	71 + 5
City-owned			City-owned	City-owned
Percent of Total Upland	7	22	41	46

Note: Variations in the total land acreage for each alternative varies slightly by the assumed take for the freeway improvements.

Development Characteristics

Total Square Feet	200,000	500,000	2,300,000 to 2,420,000	4,150,000
Net Floor Area Ratio (Average FAR)	0.2 to 0.4	0.3 to 0.4	0.75 to 0.90	1.44
Average Height	2 stories	2 stories	3 to 4 stories	5 to 6 stories
Maximum Height	2 stories	2 stories	6 stories	10 stories

Table 14

DEVELOPMENT CHARACTERISTICS OF GENERIC ALTERNATIVES BY SUBAREA

	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
PHASE I				
1. EAST BRICKYARD	10 ac. Additional Nature Preserve	10 ac. Additional Nature Preserve	8-10 ac. 230,000 s.f. Hotel 300 rooms Max. 3-4 stories Max. 20% site coverage, FAR .6 50% landscaped o.s. 240-320 cars required	10 ac. Public Access Easement
2. EAST MEADOW Along Freeway	10-12 ac. Freeway Buffer, Possible Playing Fields	10-12 ac. Freeway Buffer, Possible Playing Fields	10-12 ac. (3-5 ac. parcels) 532,000 s.f. 290 housing units + 300,000 s.f. office Max. 40' for housing, 65' for office Max. 55% site coverage, FAR 1.0 Min. 30% landsc. o.s. 1,040 cars required	10 ac. (1 parcel) 850,000 s.f. Hotel, Office, Support Retail 50-100' heights Max. 75% coverage, FAR 2.03 Min. 25% land. o.s. 1,700 cars required
3. CENTRAL AND NORTH MEADOW	35 ac. Open Space Concept: Major Multi-use Space	35 ac. Open Space Concept: Low Maintenance Naturalistic Park	35 ac. Open Space Concept: Civic/ Cultural Concourse, including 50,000- 150,000 s.f. of conference, exhibit, and cultural facilities	24 ac. public access easement 15.25 ac. dev't. 955,000 s.f. Hotel, Office, Support Retail 50-75' heights Max. 75% coverage, FAR 1.5 Min. 25% land. o.s. 1,500 cars required

4. MARINA EDGE	7 ac. + 5 City-owned 200,000 s.f. Commercial Rec./ Community Meeting Rooms Max. 2 stories Max. 20% site coverage, FAR .2-.4 50% landscaped o.s. 400-600 cars required	5-7 ac. Open Space	7 ac. + 5 City-owned 200,000 s.f. 250-room Hotel + 35,000 s.f. Retail/ Restaurant Max. 3 stories Max. 25% site coverage, FAR .3 50% landscaped o.s. 300 cars required	5 ac. + 5 City-owned 150,000 s.f. Comm. Rec./Specialty Retail/Public Conf. Center 35-75' heights Max. 50% coverage, FAR .23 25% landscaped o.s. 550 cars required
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PHASE II (based on Santa Fe lease to Pacific Racing Association, currently scheduled to expire in 1997)

5. NORTH BASIN Along Freeway	20-25 ac. Open Space	37 ac. (incl. Horse Barns) 500,000 s.f. Hotel (300 rms.) + Hotel/Conf. (350 rms. + 50,000 s.f. conf. center) + Comm. Rec. (100,000 s.f.) Max. 2 stories Max. 25% site coverage, FAR .2-.4 50% landscaped o.s. 1,050 cars required	15-20 ac. (3-5 ac. parcels) 705,000 s.f. 350 housing units + 425,000 s.f. Office Max. 40' for housing, 65' for office Max. 55% site coverage, FAR 1.0 Min. 30% landsc. o.s. 1,400 cars required	24 ac. (1 parcel) 1,215,000 s.f. Office, R&D, Support Retail 50-75' heights Max. 50% coverage, FAR 1.2 Min. 25% land. o.s. 3,000 cars required
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6. HORSE BARNS	16-17 ac. Open Space	(Development program listed under North Basin includes Horse Barn Area)	16 ac. (2-3 parcels) 670,000 s.f. 310 housing units + 420,000 s.f. office Max. 40' for housing, 65' for office Max. 55% site coverage, FAR 1.0 Min. 30% landsc. o.s. 1,360 cars required	16-17 ac. (1 parcel) 1,080,000 s.f. Office, R&D, Support Retail 50-75' heights Max. 55% coverage, FAR 1.5 Min. 25% land. o.s. 2,700 cars required
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Table 15 DEVELOPMENT PHASING SCHEDULE - PRIVATE DEVELOPMENT/a/

	Phase I		Phase II	
	1985 to 1995		1996 to 2010	
Years:	1-5	6-10	11-15	16-25
<u>Alternative 1</u>				
Marina Edge	200K s.f. Commercial/Rec.			
<u>Alternative 2</u>				
North Basin/ Horse Barns			100K s.f. Commercial/Rec. 650 hotel rooms	
<u>Alternative 3</u>				
East Brickyard	300 hotel rooms			
Marina Edge	250 hotel rooms 35K s.f. retail			
East Meadow	300K s.f. office 290 d.u.			
North Basin	425K s.f. office 350 d.u.			
Horse Barns	420,000 s.f. 310 d.u.			
<u>Alternative 4</u>				
East Meadow	517K s.f. office/ retail 500 hotel rooms			
Central Meadow	289K s.f. office/ retail 250 hotel rooms 750 hotel rooms rooms			
North Basin	607.5K s.f. office/R&D/ retail		607.5K s.f. office/R&D/ retail	
Horse Barns	1,080K s.f. office/R&D/ retail			

/a/ In thousands of square feet (K s.f.), number of hotel rooms, or number of dwelling units (d.u.).

Source: ROMA; McGuire and Company, Santa Fe Land Improvement Company.

40191h/IA

Table 16

BERKELEY WATERFRONT DRAFT PREFERRED ALTERNATIVE

September 12, 1985 Draft

	Approx. Bldg. Area (Thousands of Sq. Ft.)	Permitted Height	Building Footprint (Coverage)	Offstreet Parking Requirement	Siting Requirements
PHASE I					
500-ROOM HOTEL	320	45 feet	100,000 s.f.	500 cars -adjacent to I-80 -min. 300' from shoreline	East Meadow: -East of North Basin shoreline edge and adjacent to Univ. Ave.
CONFERENCE CENTER	40		40,000 s.f.	200 cars -centrally located for visitors -adjacent to frontage rd. & Univ. Ave.	
PHASE I					
WATERFRONT CENTER	75	25 feet	75,000 s.f.	300 cars -includes shared parking w/ civic- cultural center	Marina Edge: -Extending no further than 300 feet from the existing Marina edge; -Retail and food service frontage along public promenade.
Commercial/Recreation: -retail -restaurant and food services -waterfront-related office (max. 33% of enclosed space)		north of a point 670' north of the center line of Univ. Ave.; 15 ft. south of this point			
PHASE II					
SPORTS CENTER	40	25 feet	40,000 s.f.	350 cars -min. 150' from shoreline -min. 75% located adjacent to I-80	North Basin Strip: -Between Virginia St. and Gilman St.; -50% of structure set back min. 150' from shoreline; -Unobstructed public access along shoreline.
-ball fields -court games -health club/indoor sports -water-oriented concessions -public changing rooms and bathrooms -restaurants (max. 50% of the enclosed space) -bleachers					
PHASE II					
350-ROOM HOTEL	230	45 feet	77,000 s.f.	350 cars -located adjacent to I-80	Horse Barns Area: -Minimum 200 feet from shoreline; -Average 300 feet from shoreline.
TOTAL PRIVATE BUILDING PROGRAM	705				
PHASE 0					
South of University					
NATURE PRESERVE	10	15 feet	10,000 s.f.	25 cars	Brickyard and Berkeley Beach: -Minimum 450 feet from shoreline; -With ancillary structures for public access improvements.
-public uses -interpretive center					
PHASE 0					
West of Meadow	30	25 feet	30,000 s.f.	200 cars -centrally located for visitors -adjacent to Marina Dr. & Univ. Ave.	Marina Edge: -Adjacent to relocated Marina Drive.
INTERNATIONAL CIVIC- CULTURAL CENTER					
-multi-use auditorium -public meeting rooms -exhibition space -museum					
TOTAL PUBLIC BUILDING PROGRAM	40				

APPENDIX 3

REPORTS PREPARED FOR DEVELOPMENT OF THE BERKELEY WATERFRONT PLAN

Alternatives Description and Initial Evaluation Criteria, ROMA Design Group.
December 5, 1984

Summary of Opportunities and Constraints, Background Analyses, ROMA Design Group. January 28, 1985

Alternatives Description, Endorsed by City Council, ROMA Design Group.
January 29, 1985

Notes from Public Workshops, Anthony/Fleming & Associates:

1. Economic Development and Employment. February 14, 1985
2. Housing. February 21, 1985
3. Conservation/Recreation and Open Space. March 14, 1985
4. Urban Design. March 7, 1985
5. Transportation & Community Facilities. March 14, 1985

Evaluation of Alternatives, ROMA Design Group. May 16, 1985

Report on Site Improvement Costs, Woodward-Clyde Consultants. July 5, 1985

Revised Preliminary Conceptual Framework for Development of a Preferred Alternative, ROMA Design Group. July 15, 1985

Draft Preferred Alternative, ROMA Design Group. September 12, 1985

Fiscal and Employment Impacts of the Preferred Alternative, McGuire & Company. September, 1985.

Economics of the Preferred for the Berkeley Waterfront Plan, Economics Research Associates. October, 1985

Interstate 80 Alternatives Analysis and the Traffic Implications of the Preferred Berkeley Waterfront Alternatives, DKS Associates, October, 1985

Revised Planning Level Cost Estimates Including Seismic and Foundation Factors, Preferred Alternative, Berkeley Waterfront Development, Woodward-Clyde Consultants. December 5, 1985

Waterfront Development Potential Prior to CalTrans Freeway Improvements, DKS Associates. December 10, 1985

Revised Planning Level Cost Estimates, Berkeley Waterfront Development, Woodward-Clyde Consultants. January 2, 1986

Revised Preferred Alternative, ROMA Design Group. January 3, 1986

Draft Berkeley Waterfront Plan: Amendment to the City's Master Plan, Planning and Community Development Department. March 17, 1986

Draft Berkeley Waterfront Specific Plan, Planning and Community
Development Department. April 1, 1986

Revised Draft Berkeley Waterfront Plan: Amendment to the City's Master
Plan. Planning and Community Development Department. May 9, 1986

Revised Draft Waterfront Specific Plan, Planning and Community Development
Department. May 9, 1986

Draft Program Environmental Impact Report on the Berkeley Waterfront Plan,
Larry Seeman Associates, Inc. June 1986.

CITY COUNCIL

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Hal Cronkite
Eve Bach

City Manager
Acting City Manager
Assistant to the City Manager

* Former Commissioners
** Former Employee

CONSULTANTS FOR WATERFRONT PLAN

PLANNING

ROMA Design Group	Prime Consultant
Anthony/Fleming Associates	Community Involvement
ESA (Environmental Science Associates)	Environmental Assessment
McGuire and Company	Market and Financial Analyses
PAD (Planning Analysis & Development)	Social Analyses
Wilson-Porter	Engineering

SUPPLEMENTAL ANALYSES

ERA (Economics Research Associates)	Economic Analyses
Woodward-Clyde Consultants	Site Improvement Cost Estimates

LEGAL

Shute, Mihaly & Weinberger

ENVIRONMENTAL EVALUATION

Larry Seeman Associates, Inc.	Prime Consultant
Fehr & Peers Associates	Transportation
Noble Coastal & Harbor Engineering	Boat Center and Beach Study
Teresa M. Burns	Public Services and Utilities
Rogers/Pacific	

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Mary Reynolds	Senior Planner
Sylvia Toth	Secretary, Transportation Commission
Becky McLain	Secretary, Project Area Committee
Gil Kelley	Environmental Review Coordinator
Miguel Iglesias	Associate Planner, Transportation
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Manuela Albuquerque	City Attorney

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Charles DeLeuw	Traffic Engineer
William Montgomery	Chief, Parks/Marina Division
Charles Roberts	Secretary, Waterfront Commission

Health and Human Services Department

Frank Haeg	Secretary, Parks and Recreations Commission
Weldon Rucker	Secretary, Civic Arts Commission

*Former Employee

ADOPTION OF GENERAL PLAN AMENDMENT AND SPECIFIC PLAN
FOR THE BERKELEY WATERFRONT

RECOMMENDED C.E.Q.A. FINDINGS

Upon review and consideration of the final Environmental Impact Report prepared for this project (Sch. No. 86032524), which was certified by this body on October 7, 1986, and upon consideration of the revisions to the proposed Master Plan Amendment and Specific Plan, both dated August, 1986, which were recommended by the final Environmental Impact Report to mitigate identified significant adverse effects on the environment, the City Council hereby finds the following, in accordance with Sections 21081 of the Public Resources Code and Sections 15091-15093 of the C.E.Q.A. Guidelines:

INCORPORATION OF MITIGATION MEASURES
WHICH AVOID OR SUBSTANTIALLY LESSEN
SIGNIFICANT ENVIRONMENTAL IMPACTS

1. Ground Settlement, Ground Shaking, and Methane Venting

Changes have been incorporated into the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for damage to property and injury to persons from ground settlement, ground shaking and ignition of methane in the soil, which are identified in the EIR.

The EIR identifies the potential for differential ground settlement in the Meadow and the necessity for deep pile foundations for any structures located in the north meadow, the potential for lesser but still substantial differential settlement in the North Basin Strip and Stables areas, the potential for ground failure, in the event of earthquake, at the perimeter slopes along the Bay, and the potential for ignition or explosion of methane vapors in the soil, should the soil be covered without provision for adequate venting.

In the revised Specific Plan, development has been removed entirely from the Meadow area, strict requirements are placed on the design and construction of development in the North Basin Strip and Stables areas for protection from groundshaking and settlement, no development is permitted within 100 feet of the shoreline (200 feet where possible), and incorporation of special measures to insure adequate venting of subsurface methane are required of all development.

Some level of increased risk of property damage and injury due to seismic hazard would be unavoidable with waterfront development, even with the incorporation of the aforementioned revisions. Taken together with the other unavoidable impacts identified herein, the cumulative residual level of impact could be significant. Therefore, this residual impact is addressed in the Statement of Overriding Considerations included herein.

2. Increases in Site-Generated Water Run-Off

Changes have been made in the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential to worsen storm drainage at the site, which is identified in the EIR.

The EIR identifies the potential for development on site to aggravate incrementally existing storm drain conditions. The Specific Plan requires construction of a new storm drain trunk line and the addition of a new outfall. Additionally, individual developments will be required to provide for constant positive drainage away from structures.

3. Exposure to Flooding

Changes have been made in the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for damage to property and injury to persons from flooding, which is identified in the EIR.

The EIR identifies the potential for the site to be exposed to inundation from the 100-year tsunami run up at high tide, and be exposed to additional incremental flooding if sea levels rise four feet over the next century, as predicted.

The revised Specific Plan requires the development to be located above the 100-year tsunami level, including placement of fill, as necessary, and taking fill settlement into account. Protection from anticipated 500-year flood levels from sea level changes is to be addressed in all on-site flood protection planning, including the possibility of constructing perimeter levies.

Some level of flooding hazard due to tsunami and long term sea level increases is unavoidable with waterfront development, even with the incorporation of the aforementioned revisions. Taken together with the other unavoidable impacts identified herein, the cumulative residual level of adverse impact could be significant. Therefore, this residual impact is addressed in the Statement of Overriding Considerations included herein.

4. Increased Discharge of Contaminants into the Bay

Changes have been made in the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for damage to property and injury to persons from discharging contaminants into the Bay, which is identified in the EIR.

The EIR identifies the potential for development on the site to add typical urban contaminants into the site water run-off, and further identifies the potential for leachate-related water quality impacts associated with the previous filling of the site, and with the possible daylighting of Strawberry Creek.

The revised Specific Plan includes numerous provisions for controlling discharge of contaminants into the Bay, including: installation of greenbelts, porous paving and other landscaping measures, regular cleaning of streets and catch basins, requiring all development proposals to be reviewed by the Regional Water Quality Control Board for determination of proper leachate control measures, and a prioritization and acceleration by the City of community-wide sanitary sewer system requirements identified by the East Bay Infiltration and Inflow Correction Program.

5. Increased Human Contact with Poor Quality Water

Changes have been incorporated into the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for human contact with poor quality water, which is identified in the EIR.

The EIR identifies the potential for recreational development and increased human activity at the waterfront to increase human contact with poor quality water in the bay and in Strawberry Creek, should that creek be daylighted.

The Specific Plan makes development of beach and recreation facilities at the Berkeley Beach, South Basin and North Basin contingent upon demonstration of satisfactory water quality with Regional Water Quality Control Board review required. Daylighting of Strawberry Creek is not recommended in the plan.

Some level of impact, in terms of subjecting small boat center and beach users to poor quality water, is unavoidable prior to implementation of all of the off-site pollution control measures and the East Bay Infiltration/Inflow Connection Program recommendations, even with incorporation of all of the other revisions. Taken together with the other unavoidable impacts identified herein, the cumulative residual level of adverse impact could be significant. Therefore, this residual impact is addressed in the Statement of Overriding Considerations included herein.

6. Loss of Biological Resources

Changes have been made in the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for loss or disturbance of certain biological resources, including seasonal ponds and tidal areas, which are identified in the EIR.

The EIR identifies the potential for seasonal ponds to be developed (eliminated) depending upon the placement of recreation facilities, the potential for placement of Bay fill for construction of piers, the potential for fill placement in the intertidal zone for construction of the Berkeley Beach or North Basin Beach, and the potential for development of external vegetation in the North Basin strip.

The Specific Plan prohibits filling of the Bay for any purpose other than beach fill south of the Brickyard or small amounts of fill for stabilization of public access areas, prohibits development of wetlands in tidal or marsh habitats, requires sealing of the bottom seasonal ponds to increase the amount of time water is present, requires replacement of any seasonal ponds lost to development, requires enhancement of creekside areas where creeks are daylighted, and requires replanting of disturbed areas such as the North Basin strip with drought-resistant plants.

Some level of loss of seasonal ponds and other biological resources is unavoidable with waterfront development, even with incorporation of the aforementioned revisions. Although by itself this impact is not significant, when taken together with the other unavoidable impacts, the cumulative residual level of adverse impact could be significant. Therefore, this residual impact is addressed in the Statement of Overriding Considerations included herein.

7. Intensification of Land Uses and Values

Changes have been made in the Master Plan and Specific Plan which avoid or substantially lessen the potential intensification of land uses and values in nearby areas, which are identified in the EIR.

The EIR identifies the potential for the investment of public and private funds at the waterfront to increase the value of nearby parcels, resulting in increased rents for existing uses and pressure for conversion to more intensive uses, and the potential for development at the waterfront to limit visual and physical access to the shoreline, particularly in the North Basin strip.

The Specific Plan has been revised to require the phasing of new development at the waterfront, to allow time to increase the City's housing supply and reduce pressures on the cost of housing. This is coupled with the provision for agreements between the waterfront developers and the City to provide funds for the development and preservation of affordable housing in Berkeley. The revised Specific Plan also requires the Cedar Street right-of-way across the North Basin strip to be dedicated for public access.

8. Changes in the Visual Quality of the Waterfront

Changes have been incorporated into the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for detrimental changes in the visual quality of the waterfront, which are identified in the EIR.

The EIR identifies the potential for development at the waterfront to alter and obstruct views to, from, and across the site, and give the waterfront the appearance of a more urbanized setting.

The Specific Plan has been revised to remove development from the East Meadow (near the entrance to the site), if possible under the Phase I development plan, to require the clustering of development along the North Basin strip to retain view corridors at Gilman, Cedar and Virginia Streets, and to enact various design requirements which concern building setbacks, bulk, siting and landscape design. The Specific Plan has also been revised to add the requirements for Design Review for any waterfront development.

Some alteration of the visual character of the waterfront is unavoidable with waterfront development, even with the incorporation of the aforementioned revisions. Taken together with the other unavoidable impacts identified herein, the cumulative residual level of adverse impact could be significant. Therefore, this residual impact is addressed in the Statement of Overriding Considerations included herein.

9. Potential to Uncover Archaeological Resources

Changes have been made in the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for damage to subsurface archaeological resources uncovered during site preparation for development, which are identified in the EIR.

The EIR identifies the potential for archaeological resources to be uncovered during excavation, although none are presently known to be at the site. The Specific Plan would require work to be stopped if archaeological materials are encountered during project excavation and construction work, and require examination by a professional archaeologist before work could recommence.

10. Increases in Traffic Congestion

Changes have been incorporated into the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for traffic congestion on local roads and intersections, which are identified in the EIR.

The EIR identifies the potential for waterfront development, in combination with other future anticipated development in Berkeley and nearby communities to increase peak hour congestion at the University Avenue/Sixth Street and University Avenue/San Pablo Avenue intersections. The EIR shows that these intersections, as presently configured, will be over capacity by the year 2010, with or without waterfront development.

The revised Master Plan Amendment and Specific Plan require the freeway interchanges and affected local intersections, including University/Sixth and University/San Pablo, to be upgraded in specific configurations. These configurations are designed to achieve acceptable levels of service.

The revised Master Plan Amendment and Specific Plan also place requirements on developments to increase access to public transit, increase auto occupancy, provide for bicycle facilities, and enact other alternative transportation measures.

Additionally, the EIR identifies the potential for regional growth, including development at the Berkeley Waterfront, to exhaust the capacity of the East Bay I-80 corridor and the University, Ashby, and Gilman freeway ramps, even with the improvements currently being planned by CalTrans.

This additional area of impact cannot be mitigated by implementation of local measures which are within the control of the City of Berkeley. The EIR shows that these impacts are regionally-generated and would occur even if no development were to occur on the Berkeley waterfront. To potentially mitigate this regional problem, the revised Master Plan Amendment calls for the cities of Berkeley, Albany, and Emeryville to establish a joint sub-regional growth management system which would minimize congestion through phased development.

Some level of regional and local traffic impact is unavoidable with waterfront development, even with incorporation of the aforementioned revisions. This residual impact, particularly when taken with other unavoidable impacts identified herein, could be significant. Therefore, this residual impact is addressed in the Statement of Overriding Considerations included herein.

11. Necessity to Alter Local Transit Routes

Changes have been made to the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for adverse affects on the local transit (bus) service, which are identified in the EIR.

The EIR identifies the potential for development at the water to necessitate AC Transit to alter its current routes and increase service to the waterfront. The revised Master Plan Amendment and Specific Plan limit development at the waterfront, so that the number of buses in operation would not need to be significantly increased, although routes would need to be altered. The revised plans also call for major developments (hotels) to provide for shuttle serve to airports, BART and downtown.

12. Increases in Local Air Emissions

Changes have been made to the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for adverse affects of increased local air emissions, which are identified in the EIR.

The EIR identifies the potential for development at the Waterfront and in the region to cause localized "hot spots" in air emissions due to increased traffic volumes, particularly on I-80, which could adversely affect waterfront users. Also, the potential exists for considerable quantities of dust to be generated during site grading and construction.

The revised Master Plan Amendment and Specific Plan include several measures which would substantially lessen the impact of these air emissions on waterfront users, including: creation of a buffer zone between development/public access and the freeway, orientation of buildings, provision of dense landscaping to provide sheltered areas, and the requirement for an approved dust control program prior to excavation and construction.

Some increase in the potential for localized "hot spots" in air emissions from increased traffic is unavoidable with waterfront and regional development, even with the aforementioned revisions. This residual impact, particularly when taken with the other unavoidable impacts identified herein, could be significant. Therefore, this residual impact is addressed in the Statement of Overriding Considerations included herein.

13. Exposure to Increased Noise Levels

Changes have been incorporated into the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for exposure of waterfront users to excessive noise, as identified in the EIR.

The EIR identifies the potential for development of the North Basin Strip to be subject to noise from traffic, and for users of the Berkeley Beach and Brickyard areas to be exposed to freeway noise in excess of 70 dBA (CNEL).

The revised Specific Plan requires buildings in the North Basin Strip to be set back from the freeway and local roadway, and structural noise controls to be designed into these structures; exterior courtyards would face away from the freeway. Additionally, a noise berm or sound insulating wall would be created adjacent to the freeway to reduce noise levels in the Berkeley Beach and Brickyard areas.

14. Pressure to Increase the Local Population and Housing Demand

Changes have been made to the Master Plan Amendment and Specific Plan which avoid or substantially lessen the potential for adverse effects of the increased population and housing demand which would accompany new development at the waterfront, which are identified in the EIR.

The EIR identifies the potential for new development at the Waterfront to create pressure for increases in local population and housing demand. The Master Plan Amendment and Specific Plan incorporate three features which will substantially reduce this pressure: requiring new developments to comply with construction and permanent employment programs of the City which give preference to Berkeley residents in hiring, requiring new developments to pay housing mitigation fees which are to be used for preservation and development of the local (off-site) housing stock, and requiring development to be phased to allow time to increase the local housing supply.

15. Necessity to Improve Public Services and Utilities

Changes have been incorporated into the Master Plan Amendment and Specific Plan which avoid or substantially lessen the necessity to improve existing public service and utility systems, which are identified in the EIR.

The EIR identifies the potential for waterfront development to require major improvements to existing utility systems, and expansion of public services, with the added potential of costs falling on the City and public. Included are improvements for water supply, sewage collection, storm drainage, solid waste collection, roads and other public works maintenance and part development and maintenance.

The Master Plan Amendment and Specific Plan would require a phased implementation of these improvements, with the preponderance of costs falling on the developments, through impact fees, assessment districts, and other development fees.

REASONS FOR REJECTION OF ALTERNATIVES

The Council finds that specific economic considerations render infeasible the two less intensive waterfront alternatives identified in the EIR, the "no project" and "reduced" (Sierra Club) alternatives, which would have involved less significant adverse environmental impact than the Master Plan Amendment and Specific Plan adopted by Council. The Council finds that because the 170-acre waterfront site is privately owned, and because the levels of development identified for the no-project and lower-intensity alternatives maybe insufficient to allow the private owner to realize a reasonable use of its property, based on information and facts available to the Council at the time of the final EIR, these two alternatives do not appear feasible.

The Council further finds that the two more intensive alternatives identified in the EIR, the "Santa Fe" and "Full Build-out" alternatives would have involved greater adverse environmental impact than the Master Plan Amendment and Specific Plan adopted by Council. The Council finds that these two alternatives would involve levels of environmental impact which are unacceptable and which cannot be adequately mitigated, and that these alternatives would detract from the open space and character which is desired for the waterfront.

STATEMENT OF OVERRIDING CONSIDERATIONS

The EIR identifies eight areas of impact which would result from development of the waterfront and which are unavoidable, i.e. which cannot be fully mitigated, even with implementation of the mitigation measures which have been incorporated into the revised Master Plan Amendment and Specific Plan.

Although these impacts have been substantially lessened through these mitigations, the Council finds that the residual level of adverse impact in these areas will still be significant, particularly when taken altogether, and accordingly finds it necessary to consider weighing the social and economic benefits of waterfront development under these plans against the unavoidable adverse environmental impacts which will result. These findings are made pursuant to Section 21081 of the Public Resources Code and Section 15093 of the C.E.Q.A. Guidelines.

In considering the potential benefits of waterfront development under these plans, the Council finds that these benefits are substantial and include the following: 1) provides the orderly development of waterfront uses which will support recreational use, and also complement and enhance the City's character; 2) provides the level and type of developed uses which will enable the City to provide the open space, recreational facilities, and environmental enhancement measures that will enable the waterfront's unique environment to be enjoyed by all of Berkeley's citizens; and 3) provides an economic benefit to the community in terms of increased job opportunities and municipal revenues. In consideration of the foregoing, the Council finds that these benefits outweigh the level of environmental impact in the eight specified areas.

RESOLUTION NO.

ADOPTING WATERFRONT PLAN AMENDMENT TO THE BERKELEY MASTER PLAN

BE IT RESOLVED by the Council of the City of Berkeley as follows:

WHEREAS, the Berkeley Waterfront is an area of prime importance to the Bay Area and the City, because it is the connection between Berkeley and San Francisco Bay; and

WHEREAS, the Waterfront area as defined here consists of the 170 acres of privately-held lands bounded by the Interstate 80 freeway on the east, the Berkeley Marina on the west, and the Albany and Emeryville City limits on the north and south; and

WHEREAS, it is necessary for the City to amend its' Master Plan for the Waterfront to be in compliance with State law for general plans; and

WHEREAS, the City has been engaged in a planning process for the Waterfront since January 1984, including collection of data, definition and evaluation of alternatives, and preparation of several revisions of a Preferred Alternative; and

WHEREAS, the City has allocated approximately \$500,000 for consultant work and staff time for the development of a Waterfront Plan, including contributions from the property owner, and the State, as well as the City; and

WHEREAS, each step of the planning process has been subject to extensive public discussions and hearings; and

WHEREAS, the Planning Commission and the City Council have held public hearings as called for in the Master Plan Ordinance; and

WHEREAS, an Environmental Impact Report has been prepared, which evaluates the environmental impacts associated with development of the waterfront including development under several alternative scenarios; and

WHEREAS, the Environmental Impact Report identified several areas of potentially significant adverse environmental impact which can be avoided or substantially lessened by changes in the Waterfront Plan Amendment to the Berkeley Master Plan, or the Specific Plan, to implement the Waterfront Plan of the Berkeley Master Plan, including: 1) ground settlement, ground slaking and methane venting from the soil; 2) increase in site-generated waste run-off; 3) exposure to flooding hazards; 4) increased discharge of contaminants into the Bay; 5) increased human contact with poor quality waters; 6) loss of or disturbance of certain biological resources on the site, including seasonal ponds and tidal areas; 7) intensification of land uses at and around the site itself with corresponding increases in surrounding land values and rents; 8) limitation of visual access to the shoreline from Interstate 80 and a change in the visual quality of the site itself; 9) the potential for uncovering archaeological resources during site improvement; 10) increased-traffic and congestion of Interstate 80, local freeway ramps, and local streets; 11) necessity for alteration of local transit routes; 12) increase in local air emissions due to increased traffic and temporarily due to construction activity; 13) increase of noise levels due to traffic increases, and exposure of certain new uses to noise levels in excess of 70 dba (CNEL), 14) pressure to increase both the Berkeley population and demand for housing; 15) necessity of improved public services and utility systems; and

WHEREAS, the Environmental Impact report identifies eight areas of unavoidable significant adverse impact which would result from development of the Waterfront, including: 1) increased risk of property damage and injury due to seismic hazard; 2) exposure of development to flooding hazards of the 100-year tsunami, high tide and long-term sea level increases; 3) exposure of users of the beach and small boat basin to health hazards related to poor water quality, for the period of time prior to implementation of off-site pollution control measures and the East Bay Infiltration and Inflow Connection Program recommendations; 4) loss of some vegetation and wildlife habitat, including seasonal ponds; 5) alteration of the visual Character of the site by converting undeveloped land to new urban uses; 6) increasing of the already-unacceptable level of congestion of Interstate 80 and at the University Avenue and Gilman Street ramps, due to inadequate capacity; 7) localized high levels of carbon monoxide and other pollutants, which would exceed existing background levels, as a result of increased traffic; and 8) loss of a portion of the limited and non-renewable regional supply of lands identified in the Association of Bay Area Governments Regional Plan policies as offering regionally significant recreational opportunities because of size, accessibility to disadvantaged groups, or unique or specialized recreational potential.

NOW, THEREFORE, Be it Resolved that the City Council has reviewed and considered the information contained in the certified EIR prior to adopting the Waterfront Plan Amendment to the Berkeley Master Plan; and

BE IT FURTHER RESOLVED that the City Council finds, in accordance with the written findings attached hereto and made a part hereof as Exhibit A, that certain potentially significant adverse effects of development of the Waterfront have been avoided or substantially lessened due to changes in the Waterfront Plan Amendment to the Berkeley Master Plan or Specific Plan to implement the Waterfront Plan of the Berkeley Master Plan; and

BE IT FURTHER RESOLVED that the City Council finds, in accordance with the written findings attached hereto as a statement of overriding consideration, that specific remaining significant effects upon the environment, which are unavoidable, are acceptable due to overriding concerns which balance the benefits of the proposed Waterfront development against its unavoidable adverse environmental impacts; and

BE IT FURTHER RESOLVED that the City Council rejects the alternatives evaluated in the Environmental Impact Report for the reasons stated in the written findings attached hereto; and

BE IT FINALLY RESOLVED that the City Council adopts the Waterfront Plan as an amendment to the Berkeley Master Plan, attached hereto and made a part hereof, identified as Exhibit B.

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